

State of California
The Resources Agency

DEPARTMENT OF WATER RESOURCES
Division of Operations and Maintenance

STATE WATER PROJECT OPERATIONS DATA

For the month of:
April 1998

Pete Wilson
Governor
State of California

Douglas P. Wheeler
Secretary for Resources
The Resources Agency

David N. Kennedy
Director
Department of Water Resources

State of California
The Resources Agency

Department of Water Resources
Division of Operations and Maintenance

**State Water Project
Operations Data**
for the month of April 1998

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MONTHLY HIGHLIGHTS

The following highlights are activities or actions that impacted State Water Project operations during the month of April 1998.

Statewide precipitation for the month was about 125 percent of average, and seasonal accumulations since October 1 were around 160 percent of average. Northern Sierra precipitation was about 5.3 inches, 135 percent of normal for the month. The seasonal total stood at about 71 inches, 155 percent of average. The average for the total water year was approximately 50 inches.

Snowpack was 160 percent of average on April 1. Late season storms during the first part of April boosted the pack about 5 percent. Snowmelt began with the advent of warm weather around mid-month. Runoff during April was around 130 percent of average, down from the 170 percent reported for March. Statewide seasonal runoff was about 160 percent of average; all regions were above average.

As of April 30, 1.5 MAF of space remained in the major reservoirs of the Sacramento River region and 3.3 MAF in the San Joaquin River and Tulare Lake regions. Sacramento River weir overflow into the Sutter and Yolo Bypasses ended the second week of April.

Statewide reservoir storage on April 30 was approximately 110 percent of average. Last year, on April 30, reservoir storage was 112 percent of average. Total storage in major SWP reservoirs was about 4.78 MAF on April 30 compared with 4.8 MAF at this time in 1997. The average storage in the major SWP reservoirs on April 30 was 4.28 MAF. April 30 storage at Lake Oroville was about 3.03 MAF, compared to 3.24 MAF at this time last year. The State's share of San Luis Reservoir storage was about 1.06 MAF, as compared with 945,000 AF at this time last year. The combined storage in our southern reservoirs was 694,000 AF on April 30, compared with 667,000 AF at this time last year.

SWP water deliveries for 1998 through April 30 were 568,000 AF, representing a combination of annual entitlement, carryover, interruptible, and exchange waters. This is 324,000 AF less than delivered during the same period in 1997 due to very wet weather in 1998. Thermalito Afterbay diversions to Sutter Butte, Richvale, and Western Canals were initiated on April 28. A "free" water delivery program to MWD began on April 9 and totaled about 10,000 AF. This water was going to be released out of Castaic Lake to flow to the ocean and was in excess of MWD's 1998 entitlement demand. The program was suspended on April 23.

There were no spillway releases at Lake Oroville in April. Controlled releases during the last week of April at Lakes Antelope and Frenchman were made in order to prevent uncontrolled spill. Colder weather in early April slowed snowmelt run-off which allowed releases to the Feather River to be decreased from 25,000 cfs to 10,000 cfs while keeping the lake storage below flood control requirements.

At the request of the local reclamation district, the SWP began taking water into the California Aqueduct from the Kern River Intertie the first week of April. This was to assist in moving flood flows from the Kaweah and Tule rivers. The SWP used this water to meet SWP demands south of Pool 29.

On April 15, the beginning of the spring "pulse" flow period, the San Joaquin River flow was about 25,000 cfs. Tracy exports increased from about 750 cfs, to about 1,900 cfs and remained at that level through the rest of the "pulse" flow period.

Repair work on cracked canal panels at Mile Post 55 and slope stabilization at Mile Post 52.47 required a 2,000-foot length of canal to be dewatered. Flows at Check 12 into O'Neill were reduced to zero, while pumping at Banks met South Bay demands only. Pumping for the SWP at Tracy and O'Neill Plants began on March 24 to help meet SWP demands during the outage of the California Aqueduct.

Table 1. Antelope Lake

Daily Operation

(in acre-feet except as noted)

Capacity: 22,566 ac-ft

April 1998

Date	Water Surface Elevation (in feet)	Storage	Storage Change	Outflow in cfs						Computed Inflow 1/	
				Regulated Release			Spill	Estimated Evaporation And Seepage 1/	Total Outflow 1/		
				Stream-flow Maint.	Water Supply Contract	Water Right					
Mar 31	4999.99	20,736									
1	5000.19	20,921	185	69	0	0	0				
2	5000.27	20,992	71	69	0	0	0				
3	5000.38	21,090	98	69	0	0	0				
4	5000.41	21,117	27	69	0	0	0				
5	5000.49	21,188	71	69	0	0	0				
6	5000.54	21,233	45	69	0	0	0				
7	5000.58	21,269	36	69	0	0	0				
8	5000.60	21,287	18	69	0	0	0				
9	5000.67	21,350	63	69	0	0	0				
10	5000.70	21,376	26	69	0	0	0				
11	5000.77	21,439	63	69	0	0	0				
12	5000.80	21,467	28	69	0	0	0				
13	5000.87	21,530	63	69	0	0	0				
14	5000.89	21,548	18	69	0	0	0				
15	5000.90	21,557	9	69	0	0	0				
16	5000.81	21,467	-90	104	0	0	0				
17	5000.67	21,350	-117	140	0	0	0				
18	5000.59	21,278	-72	140	0	0	0				
19	5000.58	21,269	-9	140	0	0	0				
20	5000.66	21,341	72	140	0	0	0				
21	5000.90	21,557	216	140	0	0	0				
22	5001.46	22,066	509	63	0	0	0				
23	5002.10	22,657	591	20	0	0	0				
24	5002.62	23,144	487	20	0	0	27				
25	5002.89	23,399	255	20	0	0	89				
26	5003.04	23,542	143	20	0	0	129				
27	5003.17	23,666	124	20	0	0	161				
28	5003.32	23,809	143	20	0	0	204				
29	5003.44	23,924	115	20	0	0	252				
30	5003.55	24,030	106	20	0	0	294				
Total cfs-days				2,062	0	0	1,156	92	3,310	4,971	
Total ac-ft				3,294	4,090	0	2,293	182	6,565	9,859	

1/ Values not available on a daily basis.

Table 2. Frenchman Lake

Daily Operation

(in acre-feet except as noted)

Capacity: 55,477 ac-ft

April 1998

Date	Water Surface Elevation (in feet)	Storage	Storage Change	Outflow in cfs						Computed Inflow	
				Regulated Release			Spill	Estimated Evaporation And Seepage 1/	Total Outflow 1/		
				Stream-flow Maint.	Water Supply Contract	Water Right					
Mar 31	5585.31	51,329									
1	5585.50	51,615	286	3	0	0	0				
2	5585.61	51,781	166	3	0	0	0				
3	5585.51	51,630	-151	3	0	0	0				
4	5585.70	51,918	288	3	0	0	0				
5	5585.71	51,933	15	3	0	0	0				
6	5585.83	52,115	182	3	0	0	0				
7	5585.97	52,327	212	3	0	0	0				
8	5586.05	52,449	122	3	0	0	0				
9	5586.06	52,465	16	3	0	0	0				
10	5586.20	52,678	213	3	0	0	0				
11	5586.33	52,877	199	3	0	0	0				
12	5586.51	53,154	277	3	0	0	0				
13	5586.64	53,354	200	3	0	0	0				
14	5586.75	53,524	170	3	0	0	0				
15	5586.86	53,694	170	3	0	0	0				
16	5586.97	53,864	170	3	0	0	0				
17	5587.09	54,050	186	3	0	0	0				
18	5587.21	54,237	187	3	0	0	0				
19	5587.33	54,424	187	3	0	0	0				
20	5587.45	54,612	188	3	0	0	0				
21	5587.58	54,815	203	3	0	0	0				
22	5587.57	54,800	-15	3	0	0	0				
23	5587.84	55,224	424	3	0	0	0				
24	5588.10	55,635	411	3	0	0	0	2			
25	5588.24	55,857	222	3	0	0	0	10			
26	5588.45	56,191	334	3	0	0	0	29			
27	5588.58	56,398	207	3	0	0	0	56			
28	5588.74	56,654	256	3	0	0	0	81			
29	5588.75	56,670	16	3	0	0	0	96			
30	5588.89	56,894	224	3	0	0	0	112			
Total cfs-days				---	90	0	0	386	156	632	3,438
Total ac-ft				5,565	178	0	0	766	310	1,254	6,819

1/ Values not available on a daily basis.

Table 3. Lake Davis

Daily Operation
(in acre-feet except as noted)

Capacity: 84,371 ac-ft

April 1998

Date	Water Surface Elevation (in feet)	Storage	Storage Change	Outflow in CFS					Computed Inflow 1/	
				Regulated Release			Spill	Estimated Evaporation And Seepage 1/		
				Stream-flow Maint.	Water Supply Contract	Water Right				
Mar 31	5769.09	62,369								
1	5769.11	62,437	68	66	0	0	0			
2	5769.12	62,471	34	66	0	0	0			
3	5769.16	62,608	137	66	0	0	0			
4	5769.15	62,574	-34	66	0	0	0			
5	5769.15	62,574	0	66	0	0	0			
6	5769.16	62,608	34	66	0	0	0			
7	5769.16	62,608	0	66	0	0	0			
8	5769.14	62,540	-68	66	0	0	0			
9	5769.15	62,574	34	66	0	0	0			
10	5769.16	62,608	34	66	0	0	0			
11	5769.18	62,677	69	66	0	0	0			
12	5769.18	62,677	0	66	0	0	0			
13	5769.22	62,814	137	66	0	0	0			
14	5769.22	62,814	0	66	0	0	0			
15	5769.22	62,814	0	66	0	0	0			
16	5769.20	62,745	-69	66	0	0	0			
17	5769.22	62,814	69	66	0	0	0			
18	5769.25	62,917	103	66	0	0	0			
19	5769.30	63,089	172	66	0	0	0			
20	5769.38	63,364	275	66	0	0	0			
21	5769.50	63,779	415	66	0	0	0			
22	5769.64	64,265	486	66	0	0	0			
23	5769.76	64,683	418	67	0	0	0			
24	5769.89	65,137	454	67	0	0	0			
25	5769.98	65,453	316	67	0	0	0			
26	5770.08	65,804	351	67	0	0	0			
27	5770.20	66,228	424	67	0	0	0			
28	5770.31	66,617	389	67	0	0	0			
29	5770.41	66,972	355	67	0	0	0			
30	5770.53	67,400	428	67	0	0	0			
Total cfs-days				---	1,988	0	0	0	352	
Total ac-ft				5,031	3,943	0	0	0	699	
									2,340	
									4,877	
									9,673	

1/ Values not available on a daily basis.

Table 4. Lake Oroville

Daily Operation

(in acre-feet except as noted)

Capacity: 3,537,580 ac-ft

April 1998

Date	Water Surface Elevation (in feet)	Storage	Storage Change	Outflow						Inflow	
				Hyatt Powerplant Generation 1/	Palermo Canal	Spillway Leakage 2/	Evaporation 3/	Spill	Total Outflow	Hyatt Powerplant Pumpback	Computed Inflow 4/
Mar 31	850.30	2,812,374									
1	850.28	2,812,105	-269	27,757	2	50	7	0	27,816	0	27,547
2	850.00	2,808,348	-3,757	28,160	2	50	65	0	28,277	0	24,520
3	850.23	2,811,434	3,086	24,949	2	50	36	0	25,037	0	28,123
4	851.33	2,826,227	14,793	10,502	2	50	14	0	10,568	0	25,361
5	851.96	2,834,724	8,497	14,069	2	50	86	0	14,207	0	22,704
6	852.37	2,840,263	5,539	17,702	2	51	43	0	17,798	0	23,337
7	852.67	2,844,321	4,058	18,914	2	51	108	0	19,075	0	23,133
8	852.88	2,847,164	2,843	18,670	2	51	29	0	18,752	0	21,595
9	853.03	2,849,196	2,032	19,238	2	51	108	0	19,399	0	21,431
10	852.83	2,846,487	-2,709	21,594	2	51	51	0	21,698	0	18,989
11	852.74	2,845,269	-1,218	20,732	2	51	72	0	20,857	0	19,639
12	852.74	2,845,269	0	20,729	2	51	43	0	20,825	0	20,825
13	852.75	2,845,404	135	20,055	2	51	87	0	20,195	0	20,330
14	852.70	2,844,727	-677	23,121	2	51	58	0	23,232	0	22,555
15	852.72	2,844,998	271	20,608	2	51	51	0	20,712	0	20,983
16	852.67	2,844,321	-677	21,038	2	51	116	0	21,207	0	20,530
17	852.94	2,847,977	3,656	16,991	2	51	159	0	17,203	0	20,859
18	853.46	2,855,027	7,050	12,255	2	51	166	0	12,474	0	19,524
19	854.09	2,863,585	8,558	10,857	2	52	195	0	11,106	0	19,664
20	854.54	2,869,708	6,123	14,520	7	52	203	0	14,782	0	20,905
21	855.13	2,877,751	8,043	16,151	10	53	152	0	16,366	0	24,409
22	855.97	2,889,229	11,478	14,819	10	54	211	0	15,094	0	26,572
23	857.13	2,905,133	15,904	13,848	10	54	139	0	14,051	0	29,955
24	858.91	2,929,656	24,523	8,866	10	57	51	0	8,984	0	33,507
25	860.77	2,955,437	25,781	3,537	10	61	111	0	3,719	0	29,500
26	862.52	2,979,839	24,402	2,935	10	64	230	0	3,239	0	27,641
27	863.28	2,990,480	10,641	16,449	10	65	254	0	16,778	0	27,419
28	863.91	2,999,322	8,842	18,833	10	66	277	0	19,186	0	28,028
29	864.61	3,009,168	9,846	19,673	10	67	239	0	19,989	0	29,835
30	865.78	3,025,675	16,507	15,232	10	68	263	0	15,573	0	32,080
Total		213,301		512,804	145	1,626	3,624	0	518,199	0	731,500

1/ Includes bypass flows

2/ Only occurs when Lake water elevation is greater than or equal to 813.00 and there is no spill.

3/ Evaporation will be zero for days when there is precipitation or heavy overcast.

4/ Does not include pumpback.

**Table 5. Thermalito Forebay
Including Diversion Pool and Power Canal**

Daily Operation

(in acre-feet except as noted)

April 1998

Capacity: 25,120 ac-ft

Date	Storage 1/	Storage Change	Inflow			Outflow					Losses (-) And Gains (+)
			Lake Oroville Releases 2/	Kelly Ridge Generation	Thermalito Pumping- Generating Plant Pumpback	Thermalito Pumping- Generating Plant Generation 3/	Butte County	Thermalito Irrigation District	Releases To River 4/	Hyatt Powerplant Pumpback	
Mar 31	23,737										
1	23,552	-185	27,807	506	0	27,684	1	1	1,262	0	450
2	23,569	17	28,210	504	0	27,875	1	1	1,262	0	442
3	23,709	140	24,999	506	0	24,764	1	1	1,262	0	663
4	24,105	396	10,552	504	0	9,867	1	1	1,262	0	471
5	24,106	1	14,119	488	0	13,675	1	1	1,262	0	333
6	24,161	55	17,753	506	0	17,361	1	1	1,240	0	399
7	24,021	-140	18,965	502	0	18,717	1	1	1,256	0	368
8	23,454	-567	18,721	504	0	18,847	1	1	1,242	0	299
9	23,205	-249	19,289	506	0	19,088	1	1	1,254	0	300
10	23,178	-27	21,645	502	0	21,275	1	1	1,258	0	361
11	22,794	-384	20,783	508	0	20,704	1	1	1,260	0	291
12	23,418	624	20,780	500	0	19,747	1	1	1,260	0	353
13	23,671	253	20,106	502	0	19,441	1	1	1,262	0	350
14	23,888	217	23,172	488	0	22,529	1	1	1,262	0	350
15	24,088	200	20,659	528	0	20,132	1	1	1,264	0	411
16	23,031	-1,057	21,089	480	0	21,692	1	1	1,246	0	314
17	23,086	55	17,042	502	0	16,520	1	1	1,238	0	271
18	23,585	499	12,306	506	0	11,303	1	1	1,238	0	230
19	23,713	128	10,909	504	0	10,210	2	1	1,238	0	166
20	23,363	-350	14,572	504	0	14,370	2	1	1,244	0	191
21	23,226	-137	16,204	504	0	15,784	2	1	1,252	0	194
22	23,807	581	14,873	510	0	13,705	2	1	1,256	0	162
23	23,883	76	13,902	502	0	13,100	2	1	1,260	0	35
24	24,069	186	8,923	498	0	8,069	2	1	1,262	0	99
25	23,397	-672	3,598	520	0	3,496	2	1	1,258	0	-34
26	24,044	647	2,999	496	0	1,662	2	1	1,240	0	57
27	23,784	-260	16,514	500	0	16,123	2	1	1,240	0	92
28	23,806	22	18,899	514	0	18,344	2	1	1,240	0	196
29	23,514	-292	19,740	528	0	19,458	2	2	1,244	0	146
30	23,601	87	15,300	392	0	14,606	2	2	1,244	0	249
Total		-136	514,430	15,010	0	500,148	42	32	37,556	0	8,202

1/ Sum of Thermalito Forebay and Diversion Pool.

2/ Sum of releases from Lake Oroville through Hyatt plant, spill, and spillway leakage.

3/ Includes Bypass flows at Thermalito.

4/ The sum of the flows from fish barrier dam and the fish hatchery.

Table 6. Thermalito Afterbay

Daily Operation

(in acre-feet except as noted)

Capacity: 57,040 ac-ft

April 1998

Date	Water Surface Elevation (in feet)	Storage	Storage Change	Inflow		Outflow					Losses (-) and Gains (+)	Total Releases to River 2/	
				Thermalito Pumping-Generating Plant Generation 1/	Sutter Butte Canal	Western Canal Lateral	Richvale Canal	Western Canal	Afterbay River Outlet	Thermalito Pumping-Generating Plant Pumpback			
Mar 31	131.40	36,962											
1	131.74	38,178	1,216	27,684	0	0	0	0	26,777	0	309	28,039	
2	132.14	39,631	1,453	27,875	0	0	0	0	26,777	0	355	28,039	
3	131.79	38,358	-1,273	24,764	0	0	0	0	26,777	0	740	28,039	
4	128.66	27,844	-10,514	9,867	0	0	0	0	20,827	0	446	22,089	
5	127.30	23,774	-4,070	13,675	0	0	0	0	18,724	0	979	19,986	
6	126.82	22,411	-1,363	17,361	0	0	0	0	18,744	0	20	19,984	
7	126.80	22,355	-56	18,717	0	0	0	0	18,744	0	-29	20,000	
8	126.77	22,271	-84	18,847	0	0	0	0	18,724	0	-207	19,966	
9	126.94	22,748	477	19,088	0	0	0	0	18,744	0	133	19,998	
10	127.72	24,998	2,250	21,275	0	0	0	0	18,724	0	-301	19,982	
11	128.33	26,828	1,830	20,704	0	0	0	0	18,744	0	-130	20,004	
12	128.68	27,906	1,078	19,747	0	0	0	0	18,744	0	75	20,004	
13	128.81	28,312	406	19,441	0	0	0	0	18,744	0	-291	20,006	
14	129.86	31,688	3,376	22,529	0	0	0	0	18,744	0	-409	20,006	
15	130.24	32,954	1,266	20,132	0	0	0	0	18,724	0	-142	19,988	
16	131.09	35,870	2,916	21,692	0	0	0	0	18,328	0	-448	19,574	
17	131.49	37,282	1,412	16,520	0	0	0	0	14,718	0	-390	15,956	
18	130.44	33,629	-3,653	11,303	0	0	0	0	14,718	0	-238	15,956	
19	128.98	28,846	-4,783	10,210	0	0	0	0	14,718	0	-275	15,956	
20	129.49	30,478	1,632	14,370	0	0	0	0	12,516	0	-222	13,760	
21	130.90	35,208	4,730	15,784	0	0	0	0	10,731	0	-323	11,983	
22	131.66	37,890	2,682	13,705	0	0	0	0	10,711	0	-312	11,967	
23	132.30	40,220	2,330	13,100	0	0	0	0	10,731	0	-39	11,991	
24	131.47	37,211	-3,009	8,069	0	0	0	0	10,731	0	-347	11,993	
25	129.30	29,865	-7,346	3,496	0	0	0	0	10,711	0	-131	11,969	
26	126.26	20,870	-8,995	1,662	0	0	0	0	10,711	0	54	11,951	
27	127.99	25,801	4,931	16,123	0	0	0	0	10,731	0	-461	11,971	
28	130.16	32,685	6,884	18,344	296	0	32	65	10,731	0	-336	11,971	
29	132.38	40,516	7,831	19,458	448	0	50	97	10,731	0	-301	11,975	
30	133.20	43,605	3,089	14,606	450	0	61	97	10,731	0	-178	11,975	
Total		6,643		500,148	1,194	0	143	259	489,510	0	-2,399	527,066	

1/ Includes Bypass flows at Thermalito.

2/ The sum of the flows from the fish barrier dam, fish hatchery, and afterbay river outlet.

Table 7. Oroville-Thermalito Complex

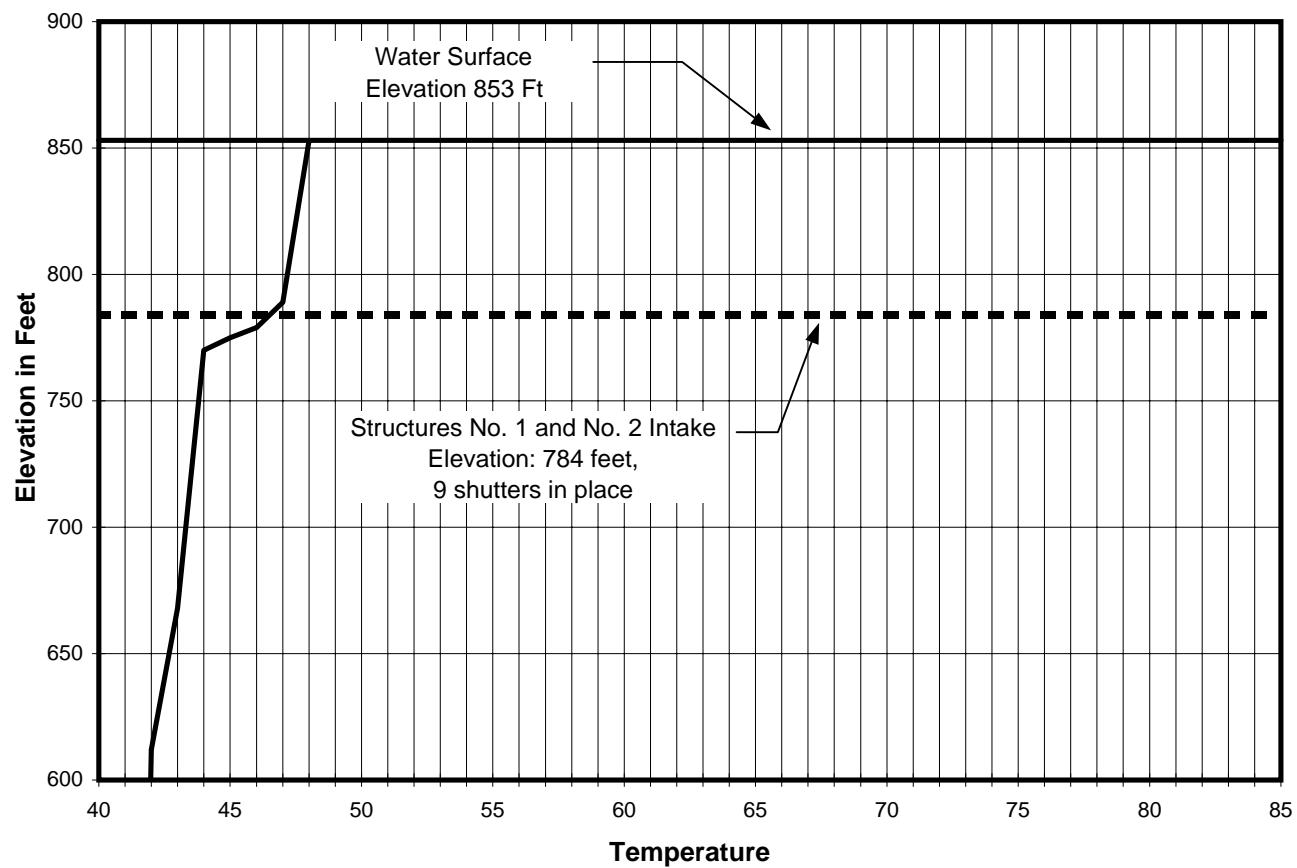
Water Temperature Data

(in degrees Fahrenheit)

April 1998

Date	Mean Daily Temperature	
	Thermalito Afterbay Outlet	Fish Hatchery
1	47	47
2	46	47
3	47	46
4	46	47
5	45	47
6	45	47
7	46	47
8	46	47
9	47	47
10	49	47
11	48	47
12	48	47
13	48	46
14	48	46
15	48	48
16	49	48
17	50	48
18	51	48
19	53	48
20	54	49
21	54	48
22	54	48
23	52	48
24	52	48
25	53	49
26	55	49
27	56	49
28	56	49
29	55	49
30	54	49

**Lake Oroville Temperature Profile
on April 15, 1998**



Note: Water surface elevations on Table 4 are taken at Oroville Dam at midnight and may differ slightly from those shown on this table which are normally taken at mid-day and upstream from Oroville Dam.

Table 8. Aqueduct Operation
Delta Field Division

(in acre-feet except as noted)

April 1998

<u>North Bay Aqueduct</u>	
Pumped at Barker Slough Pumping Plant	2,220
Travis Turnout	92
Fairfield/Vacaville Turnout	238
Pumped at Cordelia Pumping Plant	1,742
Cordelia Pumping Plant Spillway	0
Computed Losses (-) or Gains (+)	-148
Benicia Turnout	842
Vallejo Turnout	358
American Canyon 1	119
American Canyon 2	0
Napa City Turnout	423
Total Deliveries (After Cordelia)	1,742
Change in Storage at Napa Terminal Tank	0
<u>California Aqueduct</u>	
Amount Pumped at Banks Pumping Plant	1,871
Amount Pumped at South Bay Pumping Plant	942
Deliveries From California Aqueduct (Oak Flat Water District, Tracy Golf, Veterans Cemetery, and Musco Olive)	111
Inflow into California Aqueduct	0
Change in Storage	-171
Flow Past Check 12	0
Computed Losses (-) or Gains (+)	-989

Table 9. Delta Field Division Plant Data

(in acre-feet)

April 1998

Date	North Bay Aqueduct		California Aqueduct		South Bay Aqueduct			
	Barker Slough Pumping Plant	Cordelia Pumping Plant	Banks Pumping Plant		South Bay Pumping Plant	Del Valle Pumping Plant		
			Total	SWP		Into Lake	Into Aqueduct	Gravity Flow Through Plant Into Aqueduct
1	39	32	0	0	47	0	0	86
2	31	27	0	0	47	0	0	66
3	40	35	0	0	47	0	0	66
4	32	29	0	0	47	0	0	66
5	31	32	0	0	44	0	0	66
6	28	27	0	0	19	0	0	216
7	34	34	816	816	12	0	0	215
8	41	31	9	9	26	0	0	225
9	35	29	32	32	30	0	0	241
10	38	34	0	0	26	0	0	232
11	34	33	0	0	31	0	0	193
12	29	28	0	0	12	0	0	222
13	54	35	0	0	12	0	0	220
14	83	53	0	0	9	0	0	194
15	106	77	0	0	17	0	0	203
16	104	77	0	0	12	0	0	209
17	98	72	0	0	20	0	0	216
18	118	41	0	0	12	0	0	220
19	113	84	0	0	15	0	0	223
20	117	86	0	0	23	0	0	229
21	119	83	0	0	23	0	0	244
22	129	89	0	0	59	0	0	255
23	121	86	0	0	35	0	0	246
24	94	78	0	0	60	0	0	213
25	83	81	0	0	60	0	0	193
26	86	86	639	639	64	0	0	191
27	96	88	375	375	40	0	0	197
28	116	108	0	0	29	0	0	202
29	86	75	0	0	23	0	0	203
30	85	72	0	0	41	0	0	225
Total	2,220	1,742	1,871	1,871	942	0	0	5,777

Table 10. Clifton Court Forebay

Daily Operation of Gates

April 1998

Date	Time Opened	Time Closed	Amount of inflow in Acre-Feet	Date	Time Opened	Time Closed	Amount of inflow in Acre-Feet
1	---	---	0	16	---	---	0
2	---	---	0	17	---	---	0
3	---	---	0	18	---	---	0
4	---	---	0	19	---	---	0
5	---	---	0	20	---	---	0
6	---	---	0	21	---	---	0
7	---	---	0	22	---	---	0
8	---	---	0	23	---	---	0
9	---	---	0	24	---	---	0
10	---	---	0	25	---	---	0
11	---	---	0	26	20:30	---	1,000
12	---	---	0	27	---	00:03	31
13	---	---	0	28	---	---	0
14	---	---	0	29	---	---	0
15	---	---	0	30	---	---	0

Table 11. Governor Edmund G. Brown California Aqueduct
 Delta Field Division, Monthly Deliveries

(In acre-feet)

April 1998

Reach No.	Operating Pool		Turnout	Total Diversions	Deliveries					
	Beginning and Ending				Entitle-ment	USBR	Misc.	Loan Water	1997 Carryover Ent.	
	No.	Structure	Mile							
1	Banks Pumping Plant	3.32		1,871	33	33	33	33	33	
	South Bay Pumping Plant	4.49	Bethany Reservoir Inlet	942						
	Check No. 1	5.95								
	2	Check No. 2	12.01							
	3		12.47	Musco Olive						
		Check No. 3	18.29							
	4		22.16	Tracy Golf & Country Club						
		Check No. 4	23.99							
	5	Check No. 5	29.73							
	6	Check No. 6	34.24							
	7		35.22	Turlock Fruit Company Inflow						
2A	8		42.46	Oak Flat Water District-A	10	10	10	10	10	
			43.81	Oak Flat Water District-B	6	6	6	6	6	
		Check No. 8	44.64	Oak Flat Water District-C	59	59	59	59	59	
	9		45.97							
			46.18	Oak Flat Water District-D	1	1	1	1	1	
				Oak Flat Totals:	76	76	76	76	76	
		Check No. 9	51.30							
	10	Check No. 10	56.86							
	11	Check No. 11	61.40							
	12		66.14	Veteran's Cemetery	2	2	2	2	2	
		Check No. 12	66.71		0	0	0	0	0	

Table 12. South Bay Aqueduct
Delta Field Division, Monthly Deliveries

April 1998

(In acre-feet)

Reach No.	Operating Pool		Turnout	Total Diver-sions	Deliveries				
	Beginning and Ending				Entitle-ment	Ext. M & I Cry. Ovr.	Local	Recre-ation	
	No.	Structure	Mile						
1	1	South Bay Pumping Plant	0.00	(into South Bay Aqueduct)	942	2	1	563	
			3.17	Granite - Vasco Rd. (Temp.)	0				
			3.18	Oakland Scavenger Zone 7	2				
	Check No. 1	3.91							
	Check No. 2	5.21							
2	3		7.21	Zone 7 Altamont	1	19	52	4	
		Check No. 3	9.49	Zone 7 Patterson Inflow Exchanged	563				
				Zone 7 Patterson Project Water	0				
	Check No. 4	10.68							
4	Check No. 5	12.29				28	4	4	
	6		13.55	Zone 7 Wente #1	52				
			14.16	Zone 7 Wente #2	19				
		Check No. 6	14.65						
	7		14.78	Zone 7 Arroyo Mocho	0				
		Check No. 7	16.38						
			16.57	Zone 7 Wente #3	28				
			16.69	Zone 7 Norman Nursery	0				
			16.70	Zone 7 Concannon Stored Exchange	4				
5	8	Del Valle Branch Pipeline Junction	18.63	(Flood releases to South Bay Aqueduct)	1,742	1,016	14	2,057	
				(Stored releases to South Bay Aqueductt)	4,035				
		Deliveries through Del Valle Branch Pipeline		Arroyo Valle #1 & #2 Inflow Released	0				
				Arroyo Valle #1 & #2 Inflow Exchanged	0				
				Lake Del Valle Recreation	4				
				Zone 7 Wente #5	0				
				So. Livermore Project	0				
			19.20	So. Livermore Inflow Released	1,016				
				So. Livermore Inflow Exchanged	0				
			19.21	Zone 7 - Kalthrof Detjens	14				
6		La Costa Tunnel	22.50	ACWD Vallecitos	0				
			25.97	City of San Francisco San Antonio	0				
7		Mission Tunnel	28.97	ACWD - Bayside 1 & 2 Project Water:	0				
				Inflow Released	2,057				
8		Santa Clara Pipeline	35.86	Stored Released: S.C.V.W.D.	0				
				Meter	1,047	1,047			

Table 13. Lake Del Valle

Daily Operation

(in acre-feet except as noted)

April 1998

Capacity: 77,106 ac-ft

Date	Water Surface Elevation (feet)	Storage	Storage Change	Inflow		Outflow					Precipitation (inches)
				Natural 1/ 3/	From South Bay Aqueduct	Arroyo Valle	South Bay Aqueduct 3/	Recreation Deliveries 2/	Evaporation	Total Outflow	
Mar 31	702.46	39,533									
1	702.66	39,674	141		0	0		0	0	0	0.14
2	702.85	39,808	134		0	0		0	6	6	0.00
3	703.06	39,957	149		0	0		0	3	3	0.38
4	703.38	40,184	227		0	0		0	2	2	0.03
5	703.60	40,340	156		0	0		0	2	2	0.09
6	703.70	40,411	71		0	0		0	2	2	0.11
7	703.68	40,397	-14		0	0		0	3	3	0.05
8	703.62	40,354	-43		0	0		0	4	4	0.00
9	703.49	40,262	-92		0	0		0	5	5	0.00
10	703.46	40,241	-21		0	0		0	5	5	0.00
11	703.42	40,212	-29		0	0		0	6	6	0.06
12	703.35	40,162	-50		0	0		0	6	6	0.06
13	703.44	40,226	64		0	0		0	2	2	0.60
14	703.55	40,305	79		0	0		0	2	2	0.10
15	703.70	40,411	106		0	0		0	3	3	0.10
16	703.77	40,461	50		0	0		0	4	4	0.00
17	703.74	40,440	-21		0	0		0	9	9	0.00
18	703.68	40,397	-43		0	0		0	8	8	0.00
19	703.58	40,326	-71		0	0		0	7	7	0.00
20	703.46	40,241	-85		0	0		0	5	5	0.00
21	703.31	40,134	-107		0	0		0	7	7	0.00
22	703.10	39,985	-149		0	0		0	8	8	0.00
23	702.93	39,865	-120		0	0		0	7	7	0.01
24	702.80	39,773	-92		0	0		0	7	7	0.01
25	702.67	39,681	-92		0	0		0	7	7	0.00
26	702.54	39,590	-91		0	0		0	11	11	0.00
27	702.37	39,470	-120		0	0		1	9	10	0.00
28	702.21	39,358	-112		0	0		1	9	10	0.00
29	702.03	39,232	-126		0	0		1	9	10	0.00
30	701.82	39,085	-147		0	0		1	8	9	0.00
Total				-448	5,498	0	0	5,777	4	165	5,946
											1.74

1/ Total inflow from stream gaging station above Lang Canyon and accretions/depletions.

2/ To East Bay Regional Park District.

3/ Not available on a daily basis.

NR=No Records

Table 14. Consolidated State-Federal O'Neill Forebay

Daily Operations

April 1998

United States
Department of the Interior
Bureau of Reclamation
Central Valley Project

State of California
The Resources Agency
Department of Water Resources
State Water Project

Capacity: 56,430 Acre-feet

Date	Water Surface Elev. (in feet)	Storage Change (ac-ft)	Side Flows 1/	Inflow (cfs)			Outflow (cfs)				Computed Losses (-) Gains (+) (cfs)
				O'Neill Pumping Generating Plant (Pumped)	Gianelli Pumping Generating Plant (Generation)	California Aqueduct	O'Neill Pumping Generating Plant (Generation)	Gianelli Pumping Generating Plant (Pumped)	Dos Amigos Pumping Plant	Deliveries 2/	
Mar 31	222.51	49,740									
1	221.63	47,414	-2,326	5	1,460	0	0	95	0	2,652	0
2	222.92	50,833	3,419	5	3,249	0	0	0	0	1,526	0
3	223.88	53,404	2,571	4	2,768	260	0	0	505	1,324	0
4	223.48	52,330	-1,074	4	1,021	0	0	0	1,009	744	0
3/ 5	223.40	52,116	-214	3	483	0	0	0	0	646	0
6	223.24	51,687	-429	4	498	0	0	0	288	562	1
7	223.47	52,303	616	4	1,182	617	0	0	1,007	542	0
8	224.09	53,969	1,666	3	1,539	0	0	0	0	734	1
9	224.15	54,131	162	3	854	0	0	0	143	707	0
10	223.70	52,920	-1,211	2	451	0	0	0	499	705	0
11	223.54	52,491	-429	2	467	0	0	0	0	748	0
12	223.35	51,982	-509	2	450	0	0	0	0	813	0
13	223.15	51,447	-535	2	472	0	0	0	0	745	0
14	222.91	50,806	-641	2	495	0	0	0	0	940	0
15	222.64	50,086	-720	2	499	0	0	0	0	937	6
16	222.27	49,102	-984	2	505	0	0	0	0	1,156	0
17	221.59	47,309	-1,793	2	489	0	0	0	0	1,503	2
18	220.50	44,453	-2,856	2	519	0	0	0	0	1,969	0
19	220.04	43,256	-1,197	2	538	0	0	0	0	1,182	0
20	219.88	42,841	-415	2	1,246	0	0	0	0	1,559	0
21	219.44	41,708	-1,133	2	1,575	0	0	0	0	2,145	3
22	219.22	41,145	-563	2	1,351	0	0	0	0	1,649	8
23	219.22	41,145	0	2	1,338	1,412	0	0	0	2,871	9
24	219.22	41,145	0	2	1,395	1,417	0	0	0	2,823	9
25	220.50	44,453	3,308	1	1,421	2,830	0	0	0	2,610	6
26	219.88	42,841	-1,612	1	1,394	0	0	0	0	2,299	6
27	220.34	44,036	1,195	1	1,396	1,662	0	0	0	2,648	9
28	220.58	44,661	625	1	1,399	1,667	0	0	0	2,847	12
29	220.47	44,374	-287	1	1,406	1,667	0	0	0	3,324	13
30	219.46	41,759	-2,615	1	1,364	1,767	0	0	0	4,440	16
Total			-7,981	69	33,224	13,299	0	95	3,451	49,350	101
Mean cfs ac-ft			---	2	1,107	443	0	3	115	1,645	3
			-7,981	136	65,854	26,374	0	188	6,844	97,832	201
											4,720

1/ Side flows from floodwater at Drain Inlet, Mile 82.67R.

2/ Includes 3 AF delivered to DFG at O'Neill Forebay; does not include Parks and Recreation deliveries shown on Table 19.

Total Parks and Recreation deliveries for the year are included in December's operation report.

3/ 23 hr. day; The factor for converting CFS to AF is 1.9008 on 4/5/98.

Table 15. Consolidated State-Federal San Luis Reservoir
Daily Operations
April 1998

United States
 Department of the Interior
 Bureau of Reclamation
 Central Valley Project

State of California
 The Resources Agency
 Department of Water Resources
 State Water Project

Date	Water Surface Elev. (in feet)	Storage (ac-ft)	Storage Change (ac-ft)	Capacity: 2,027,835 ac-ft				Computed Losses (-) Gains (+) (cfs)	Evap. (in)	Prec. (in)
				Inflow (cfs)	Outflow (cfs)					
Gianelli Pumping Generating Plant (Pumped)	Gianelli Pumping Generating Plant (Generation)	Pacheco Tunnel 1/	Sisk Dam Spill							
Mar 31	543.02	2,028,090								
1	543.00	2,027,835	-255	0	0	120	0	-9	0.06	0.28
2	542.98	2,027,581	-254	0	0	117	0	-11	0.10	0.00
3	543.01	2,027,963	382	505	260	106	0	54	0.07	0.00
4	543.06	2,028,598	635	1,009	0	102	0	-587	0.05	0.52
2/ 5	543.06	2,028,598	0	0	0	107	0	107	0.07	0.13
6	543.06	2,028,598	0	288	0	115	0	-173	0.22	0.01
7	543.20	2,030,377	1,779	1,007	617	153	0	660	0.19	0.04
8	543.18	2,030,123	-254	0	0	118	0	-10	0.13	0.02
9	543.19	2,030,250	127	143	0	141	0	62	0.22	0.00
10	543.17	2,029,996	-254	499	0	143	0	-484	0.25	0.00
11	543.17	2,029,996	0	0	0	149	0	149	0.17	0.12
12	543.17	2,029,996	0	0	0	156	0	156	0.07	0.17
13	543.17	2,029,996	0	0	0	152	0	152	0.28	0.08
14	543.10	2,029,106	-890	0	0	142	0	-307	0.19	0.05
15	543.09	2,028,979	-127	0	0	133	0	69	0.19	0.00
16	543.06	2,028,598	-381	0	0	103	0	-89	0.17	0.03
17	543.04	2,028,344	-254	0	0	136	0	8	0.26	0.00
18	543.01	2,027,963	-381	0	0	141	0	-51	0.30	0.00
19	542.99	2,027,708	-255	0	0	149	0	20	0.20	0.00
20	542.95	2,027,200	-508	0	0	155	0	-101	0.30	0.00
21	542.95	2,027,200	0	0	0	150	0	150	0.25	0.00
22	542.92	2,026,819	-381	0	0	154	0	-38	0.27	0.00
23	542.71	2,024,152	-2,667	0	1,412	140	0	207	0.39	0.00
24	542.46	2,020,978	-3,174	0	1,417	140	0	-43	0.13	0.30
25	541.95	2,014,509	-6,469	0	2,830	129	0	-302	0.27	0.00
26	541.92	2,014,128	-381	0	0	140	0	-52	0.31	0.00
27	541.74	2,011,847	-2,281	0	1,662	150	0	662	0.30	0.00
28	541.41	2,007,667	-4,180	0	1,667	150	0	-290	0.29	0.00
29	541.11	2,003,869	-3,798	0	1,667	137	0	-111	0.28	0.00
30	540.79	1,999,821	-4,048	0	1,767	136	0	-138	0.38	0.00
Total			-28,269	3,451	13,299	4,064	0	-340	6.36	1.75
Mean cfs			---	115	443	135	0	-11	---	---
ac-ft			-28,269	6,844	26,374	8,052	0	-687	---	---

1/ Pacheco Tunnel, San Felipe Split; Santa Clara: 8,052 AF, San Benito: 0 AF.

2/ 23 hr day; the factor for converting CFS to AF is 1.9008 on 4/5/98.

Table 16. San Luis Field Division Plant Data

(in acre-feet)

April 1998

Date	Dos Amigos Pumping Plant		Gianelli Pumping - Generating Plant				San Felipe Project
	Total Pumping	SWP Pumping 1/, 2/	Total Generation	SWP Generation 1/, 2/	Total Pumping	SWP Pumping 1/, 2/	Federal
1	5,260	1,006	0	0	0	0	238
2	3,027	46	0	0	0	0	232
3	2,626	101	516	516	1,001	4	210
4	1,476	-54	0	0	2,001	-2	202
5	1,228	-63	0	0	0	0	212
6	1,115	2	0	0	571	-10	228
7	1,075	-14	1,224	1,224	1,997	-14	303
8	1,456	10	0	0	0	0	234
9	1,402	179	0	0	284	284	280
10	1,398	157	0	0	990	990	284
11	1,484	248	0	0	0	0	296
12	1,613	373	0	0	0	0	309
13	1,478	256	0	0	0	0	301
14	1,864	645	0	0	0	0	282
15	1,859	593	0	0	0	0	264
16	2,293	1,022	0	0	0	0	204
17	2,981	1,250	0	0	0	0	270
18	3,906	2,081	0	0	0	0	280
19	2,344	551	0	0	0	0	296
20	3,092	343	0	0	0	0	307
21	4,255	1,543	0	0	0	0	298
22	3,271	740	0	0	0	0	305
23	5,695	1,952	2,801	36	0	0	278
24	5,599	3,253	2,811	14	0	0	278
25	5,177	2,844	5,613	85	0	0	256
26	4,560	2,210	0	0	0	0	278
27	5,252	1,422	3,297	16	0	0	298
28	5,647	1,765	3,305	36	0	0	298
29	6,593	1,980	3,305	-73	0	0	272
30	8,807	3,943	3,504	97	0	0	270
Total	97,832	30,381	26,374	1,950	6,844	1,252	8,061

1/ Negative values may appear in SWP columns and indicate a mismatch of scheduled CVP energy and actual pumping;

adjustments to SWP water shares are made to balance the mismatch.

2/ Provisional, subject to change.

Table 17. Consolidated State-Federal Los Banos Reservoir
Daily Operations
April 1998

United States
 Department of the Interior
 Bureau of Reclamation
 Central Valley Project

State of California
 The Resources Agency
 Department of Water Resources
 State Water Project

Capacity: 34,560 ac-ft

Date	Water Surface Elev. (in feet)	Storage (ac-ft)	Storage Change (ac-ft)	Estimated Inflow (cfs)	Estimated Outflow (cfs)		Computed Losses (-) Gains (+) (ac-ft)	Evap. (in)	Prec. (in)
					Spill	Outlet			
Mar 31	327.41	20,393							
1	327.08	20,239	-154	123	0	200	-1	0.08	0.22
2	326.59	20,012	-227	86	0	200	-1	0.10	0.00
3	326.71	20,067	55	119	0	92	1	0.07	0.15
4	327.42	20,398	331	167	0	0	0	0.07	0.14
5	327.94	20,641	243	128	0	0	-12	0.07	0.05
6	328.31	20,816	175	88	0	0	0	0.19	0.02
7	328.28	20,802	-14	76	0	83	0	0.13	Trace
8	327.71	20,533	-269	65	0	200	-2	0.17	0.00
9	327.28	20,332	-201	61	0	166	6	0.22	0.00
10	327.40	20,388	56	62	0	33	-2	0.24	0.00
11	327.72	20,538	150	76	0	0	-1	0.12	0.07
12	328.04	20,688	150	76	0	0	-1	0.07	0.04
13	328.33	20,825	137	69	0	0	0	0.27	0.03
14	328.53	20,920	95	85	0	37	0	0.16	0.01
15	328.13	20,731	-189	71	0	166	-1	0.20	0.00
16	327.59	20,477	-254	72	0	200	0	0.22	0.00
17	327.49	20,430	-47	59	0	83	1	0.24	0.00
18	327.70	20,529	99	50	0	0	0	0.26	0.00
19	327.91	20,627	98	49	0	0	1	0.28	0.00
20	328.09	20,712	85	43	0	0	0	0.24	0.00
21	328.27	20,797	85	43	0	0	0	0.25	0.00
22	328.40	20,858	61	31	0	0	0	0.25	0.00
23	328.54	20,925	67	34	0	0	0	0.39	0.00
24	328.71	21,005	80	40	0	0	1	0.16	0.02
25	328.84	21,067	62	31	0	0	1	0.30	0.00
26	328.97	21,129	62	31	0	0	1	0.39	0.00
27	329.09	21,186	57	29	0	0	-1	0.27	0.00
28	329.21	21,243	57	29	0	0	-2	0.32	0.00
29	329.31	21,291	48	24	0	0	0	0.31	0.00
30	329.27	21,272	-19	0	0	0	-19	0.43	0.00
Total			879	1,917	0	1,460	-31	11.35	0.02
Mean cfs-days			---	2	0	49	-1	---	---
Acre-feet			879	3,802	0	2,892	-31	---	---

Table 18. Consolidated State-Federal Little Panoche Reservoir

Daily Operations

April 1998

United States

Department of the Interior

Bureau of Reclamation

Central Valley Project

State of California

The Resources Agency

Department of Water Resources

State Water Project

Capacity: 5,580 ac-ft

Date	Water Surface Elev. (in feet)	Storage (ac-ft) 1/	Storage Change (ac-ft) 1/	Computed Inflow (cfs)	Estimated Outflow (cfs)		Computed Losses (-) Gains (+) (ac-ft)
					Spill	Outlet 2/	
Mar 31	603.20	863					
1	603.30	869	6	33	0	30	0
2	603.30	869	0	31	0	30	-2
3	603.30	869	0	31	0	30	-2
4	603.40	875	6	31	0	30	4
5	603.40	875	0	30	0	30	0
6	603.40	875	0	30	0	30	0
7	Not Observed			27	0	30	6
8	Not Observed			27	0	30	6
9	Not Observed			27	0	30	6
10	603.10	856	-19	13	0	15	-15
11	Not Observed			14	0	15	2
12	Not Observed			14	0	15	2
13	Not Observed			14	0	15	2
14	Not Observed			14	0	15	2
15	Not Observed			14	0	15	2
16	Not Observed			14	0	15	2
17	Not Observed			14	0	15	2
18	Not Observed			14	0	15	2
19	Not Observed			14	0	15	2
20	Not Observed			14	0	15	2
21	Not Observed			14	0	15	2
22	Not Observed			14	0	15	2
23	602.85	841	-15	9	0	10	-13
24	Not Observed			9	0	10	2
25	Not Observed			9	0	10	2
26	Not Observed			9	0	10	2
27	Not Observed			9	0	10	2
28	Not Observed			9	0	10	2
29	Not Observed			9	0	10	2
30	602.80	838	-3	9	0	10	-1
Total			-25	520	0	545	---
Mean cfs ac-ft			---	17	0	18	---
			-25	1,031	0	1,081	25

1/ Not available on a daily basis

2/ Of the 1,081 AF discharged from the Panoche outlet; 295 AF entered the aqueduct at the Drain Inlet at Mile 96.57R.

Table 19a. Governor Edmund G. Brown California Aqueduct

San Luis Field Division, Monthly Deliveries

(In acre-feet)

April 1998

Reach No.	Operating Pool			Turnout	Total Diver- sions	Deliveries					
	Beginning and Ending					USBR	Transfer	DWR Recreation	USBR Recreation		
	No.	Structure	Mile								
2B	12	Check No. 12	66.71		0						
3	13	O'Neill Forebay		Department of Parks and Recreation	5			3	2		
		Outlet Check No. 13	70.85	Department of Fish & Game	3			2	1		
		70.91 Thru 85.08	San Luis Water District	198	198	198	0	5	3		
		Dos Amigos Pumping Plant	86.73		97,832						
4	14	89.03 Thru 94.06	San Luis Water District	2,063	2,063	251	3	77			
		89.66 Thru 89.67	Pacheco Water District	251							
		89.68	Panoche Water District	3							
		89.70	City of Dos Palos	77							
		Check No. 14	95.06								
	15	98.15 Thru 104.20	San Luis Water District	142	142	908	5,532				
		96.15 Thru 102.64	Panoche Water District	908							
		102.64	Broadview Water District	0							
		105.22 Thru 108.64	Westlands Water District	5,532							
		Check No.15	108.50								
			Pacheco Water District Total:	251	251	0	0	0	0		
			Broadview Water District Total:	0	0	0	0	0	0		
			City of Dos Palos Total:	77	77	0	0	0	0		
			SLWD Reach 4 Subtotal:	2,205	2,205	0	0	0	0		
			Panoche Water District Total:	911	911	0	0	0	0		
			SLWD Total:	2,403	2,403	0	0	0	0		
			Westlands WD Reach 4 Subtotal:	5,532	5,532	0	0	0	0		

Table 19b. Governor Edmund G. Brown California Aqueduct

San Luis Field Division, Monthly Deliveries (Continued)

(In acre-feet)

April 1998

Reach No.	Operating Pool			Turnout	Total Diver- sions	Deliveries					
	Beginning and Ending					USBR	Transfer	DWR	USBR		
	No.	Structure	Mile					Recreation	Recreation		
5	16		110.52			7,755	7,755				
			Thru	Westlands Water District	7,755						
			122.05	Department of Fish and Game	0						
	17	Check No. 16	122.07			6,956	6,956				
			124.18								
			Thru	Westlands Water District	6,956						
	18		132.74			7,983	7,983				
		Check No. 17	132.95								
			133.81								
	Pleasant Valley Pumping Plant		Thru	Westlands Water District	7,983	7,588	7,588				
			142.61								
			143.16	Westlands Water District	7,588						
			143.16	City of Coalinga	241						
		Check No. 18	143.23								
				Westlands WD Reach 5 Subtotal:	30,282			0	0		
6	19		145.26			10,796	10,796				
			Thru	Westlands Water District	10,796						
			151.19								
	Check No. 19	155.64				10,796		0	0		
				Westlands WD Reach 6 Subtotal:	10,796			0	0		
7	20		156.34	City of Huron	71	71	71				
			156.40								
			Thru	Westlands Water District	4,380						
			163.69								
	21	Check No. 20	164.69			164	164				
			164.79	City of Avenal	164						
			167.04								
			Thru	Westlands Water District	3,480						
			171.67								
			172.40								
				Reach 7 Total:	8,095	8,095	0	0	0		
				Westlands WD Total:	54,470			0	0		
				City of Coalinga Total:	241			0	0		
				City of Huron Total:	71			0	0		
				City of Avenal Total:	164			0	0		
				Phase I Water Total:	5			0	0		
Total San Luis Field Division Deliveries:					58,601	58,593	0	5	3		

Table 20. Consolidated State-Federal San Luis Canal 1/

Daily Operations

April 1998

United States
Department of the Interior
Bureau of Reclamation
Central Valley Project

State of California
The Resources Agency
Department of Water Resources
State Water Project

Date	Storage In Canal (ac-ft)	Storage Change (ac-ft)	Inflow (cfs)		Outflow (cfs)				Computed Losses (-) Gains (+) (cfs)	Evap. (in)	Prec. (in)
			Non- Project 2/	Dos Amigos Pumping Plant	SLWD 3/	PWD	WWD 4/	SJFD			
Mar 31	28,138										
1	29,138	1,000	5	2,652	25	14	797	1,117	-200	0.06	0.28
2	28,803	-335	5	1,526	20	11	548	1,084	-37	0.10	0.00
3	28,645	-158	8	1,324	30	21	554	841	34	0.07	Trace
4	28,713	68	8	744	45	6	537	363	234	0.05	0.52
5/ 5	28,940	227	10	619	24	18	560	71	158	0.07	0.13
6	28,880	-60	17	562	26	2	475	118	11	0.22	0.01
7	28,777	-103	25	542	29	4	480	172	67	0.19	0.04
8	28,694	-83	20	734	22	2	491	198	-83	0.13	0.02
9	27,986	-708	14	707	16	4	621	503	66	0.22	0.00
10	27,814	-172	12	705	25	3	629	83	-64	0.25	0.00
11	27,482	-332	12	748	49	2	740	102	-35	0.17	0.12
12	27,602	120	11	813	25	4	796	71	133	0.07	0.17
13	27,419	-183	8	745	25	9	741	98	28	0.28	0.08
14	27,381	-38	6	940	32	4	660	235	-34	0.19	0.05
15	27,180	-201	6	937	32	10	660	269	-74	0.19	0.00
16	27,181	1	5	1,156	42	12	668	411	-27	0.17	0.03
17	26,788	-393	5	1,503	59	13	652	736	-247	0.26	0.00
18	27,851	1,063	5	1,969	34	12	877	286	-229	0.30	0.00
19	26,981	-870	5	1,182	31	12	956	850	223	0.20	0.00
20	26,449	-532	5	1,559	31	12	888	719	-182	0.30	0.00
21	26,443	-6	4	2,145	41	20	1,130	719	-242	0.25	0.00
22	26,058	-385	3	1,649	55	28	1,211	458	-94	0.27	0.00
23	26,704	646	3	2,871	62	20	1,514	775	-177	0.39	0.00
24	26,749	45	3	2,823	68	28	1,411	1,073	-223	0.13	0.30
25	27,334	585	19	2,610	62	21	1,299	635	-317	0.27	0.00
26	27,241	-93	65	2,299	85	33	1,494	545	-254	0.31	0.00
27	27,496	255	62	2,648	69	26	1,548	798	-141	0.30	0.00
28	27,343	-153	78	2,847	100	32	1,673	986	-212	0.29	0.00
29	26,778	-565	78	3,324	84	33	1,496	1,650	-424	0.28	0.00
30	27,541	763	59	4,440	100	43	1,598	2,117	-257	0.38	0.00
Total		-597	566	49,323	1,348	459	27,703	18,085	-2,597	6.36	1.75
Mean (cfs)		---	15	1,644	45	15	923	511	-87	---	---
Acre-feet		-597	1,122	97,832	2,533	911	54,951	35,871	-5,285	---	---

1/ San Luis Canal includes Pools 14 through 21 of the California Aqueduct.

2/ Pump In of Non-Project Water (681 AF @ Lat.7L) and Flood Water (441 AF) is included in the gain or loss.

3/ Includes 250 AF AG & 1 AF M&I to Pacheco W.D. and 77 AF to the City of Dos Palos.

4/ Includes 71 AF to the City of Huron, 164 AF to the City of Avenal, 241 AF to the City of Coalinga, 5 AF Phase I Water @ Lat. 13R, and 0 AF to Broadview W.D.

5/ 23 hr. day; the factor for converting CFS to AF is 1.9008 on 4/5/98.

Table 21. San Joaquin Field Division Plant Data

(in acre-feet)

April 1998

Date	Coastal Aqueduct					California Aqueduct			
	Las Perillas Pumping Plant	Badger Hill Pumping Plant	Devil's Den Pumping Plant	Bluestone Pumping Plant	Polonio Pass Pumping Plant	Buena Vista Pumping Plant	Teerink Pumping Plant	Chrisman Pumping Plant	Edmonston Pumping Plant
1	282	295	31	29	33	1,727	1,770	1,763	1,773
2	181	198	38	38	38	1,937	1,645	1,796	1,808
3	100	95	42	37	44	1,966	2,022	1,997	1,990
4	38	40	30	29	31	1,812	1,822	1,801	1,777
5	17	19	30	26	31	1,710	1,752	1,746	1,695
6	130	130	34	32	37	1,895	1,783	1,713	1,669
7	158	158	42	38	42	1,895	1,962	1,933	2,030
8	162	164	34	31	63	2,107	2,202	2,126	1,989
9	149	151	34	31	35	2,107	2,124	2,086	2,073
10	92	100	38	36	40	2,080	2,008	2,022	1,936
11	66	72	39	38	40	1,950	2,078	2,008	1,988
12	85	85	53	49	58	2,345	2,241	2,240	2,263
13	117	125	33	32	36	2,055	2,169	2,037	2,021
14	239	250	49	46	51	2,109	2,345	2,182	2,291
15	336	357	48	42	46	2,268	2,149	2,145	2,241
16	408	403	47	45	51	2,212	2,334	2,296	2,237
17	478	464	49	44	50	2,108	2,037	2,034	2,046
18	320	272	27	24	27	1,789	1,823	1,741	1,748
19	309	280	50	46	52	2,160	2,043	2,031	1,964
20	429	392	42	39	42	2,003	2,077	1,994	1,939
21	492	454	46	46	48	2,212	1,993	1,927	1,882
22	589	532	57	55	59	2,133	2,150	1,960	1,991
23	622	571	64	64	65	1,974	1,844	1,762	1,703
24	452	439	60	63	61	1,630	1,549	1,491	1,424
25	289	290	59	59	60	1,734	1,632	1,542	1,531
26	248	206	70	70	73	2,152	1,777	1,690	1,678
27	223	231	46	46	47	1,870	1,891	1,801	1,772
28	307	300	42	44	45	2,287	1,973	1,816	1,798
29	433	440	56	57	58	2,304	2,520	2,260	2,076
30	561	575	56	57	58	3,099	2,643	2,452	2,395
Total	8,312	8,088	1,346	1,293	1,421	61,630	60,358	58,392	57,728

Table 22a. Governor Edmund G. Brown California Aqueduct

San Joaquin Field Division, Monthly Deliveries

(In acre-feet)

April 1998

Reach No.	Operating Pool		Turnout	Total Diversions	Deliveries						
	Beginning and Ending				Entitlement	Inter-ruptible Ent.	MWD Ent. Exch.	Exchange 1/	MWD Ent. 2/		
	No.	Structure									
7	21	Check No. 21	172.40	0							
8C	22			Empire West Side Irrig. Dist.							
				TL - A	0						
				County of Kings							
				TL - A	0						
				TLBWSD TL-A	110	110					
				175.18 DRWD - 1	52	52					
				180.64 TLBWSD - C	0	9					
				180.65 DRWD - 1A	9	581					
				Dudley Ridge Water Dist.							
				182.99 DRWD - 2	581						
8D				183.00 TLB WSD TL - B	7	7					
				184.63 Coastal Branch	8,312						
8D				Dudley Ridge Water Dist.							
				184.78 DRWD - 3	302	302					
				Dudley Ridge Reach 8D Total:	944	944	0	0	0		
				Tulare Lake Basin WSD Total:	117	117	0	0	0		
9	23			Check No. 22	184.82						
				Kern County Water Agency							
				189.69 Lost Hills Water Dist. - 1	1,136	1,136					
				191.18 Lost Hills Water Dist. - 2	206	206					
				194.22 Lost Hills Water Dist. - 3	264	114			150		
				Kern County Water Agency							
				196.40 Berrenda Mesa - 2	0						
				196.75 Lost Hills Water Dist. - 4	35	35					
				K.C.W.A. Reach 9 Subtotal:	1,641	1,491	0	0	150		
				Check No. 23	197.05				0		
10A	24			Kern County Water Agency							
				201.24 Lost Hills Water Dist. - 7	241	241					
				202.05 Lost Hills Water Dist. - 5	54	54					
				Kern County Water Agency							
				204.69 Lost Hills Water Dist. - 6	0						
				205.26 Lost Hills Water Dist. - 8	0						
				Check No. 24	207.94						
				Kern County Water Agency							
				209.71 Belridge Water Storage Dist. - 1A	331	254			77		
				Kern National Wildlife Refuge							
25				USBR BV-1B	0						
				209.78 Buena Vista WSD 1B	0						
				KCWA Semitropic WSD	2,763						
				KCWA Semitropic WSD Penstocks	7,310						
				USBR Total:	0	0	0	0	0		
				K.C.W.A. Reach 10A Subtotal:	10,699	549	0	0	150		
									10,000		

1/ WWD water delivered to KCWA in exchange for SWP water in accordance to agreement dated 4-6-98.

2/ Semitropic WSD is storing this water for MWD.

Table 22b. Governor Edmund G. Brown California Aqueduct

San Joaquin Field Division, Monthly Deliveries (Continued)

(In acre-feet)

April 1998

Reach No.	Operating Pool			Turnout	Total Diver- sions	Deliveries						
	Beginning and Ending		Mile			Entitle- ment	Inter- ruptible Ent.	MWD Ent. Exch.	Exchange 2/	MWD Ent. 3/		
	No.	Structure										
11B	25		210.75	Kern County Water Agency Belridge - 2	0	2,889	74	0	0	0		
			214.11	Kern County Water Agency Belridge - 3	0							
			216.62	Kern County Water Agency Belridge - 4	0							
			217.13	Kern County Water Agency Belridge - 5	2,889							
				Kern County Water Agency Belridge - 5D	74							
		Check No. 25	217.79									
				K.C.W.A. Reach 11B Subtotal:	2,963							
12D	26		219.58	Kern County Water Agency Belridge - 6	0	2,963	0	0	0	0		
			Check No. 26	224.92								
12E	27		230.37	Kern County Water Agency Buena Vista - 6	0	4/ 7,838	0	0	0	0		
			Check No. 27	231.73								
	28		235.75	Kern County Water Agency Buena Vista - 2	0							
			238.04	Kern County WA CVC (inflow)	4/ 7,838							
				DRWD CVC	0							
				Tulare Co.	0							
				Lower Tule River	0							
				Fresno Co.	0							
				Pixley ID	0							
				Hacienda								
				DWR Wells	0							
	Check No. 28	238.11										
				1/ Arvin Edison Total:	0	0	0	0	0	0		
				Reach 12E Subtotal:	0							
13B	29		241.02	Kern River Intertie (inflow)	4/ 44,784	4/ 7,838	0	0	0	0		
			242.85	KCWA Buena Vista WSD - 7	0							
				KCWA Buena Vista WSD - 5	0							
			243.09	Kern County Water Agency Buena Vista - 3	0							
		Check No. 29	244.54	Buena Vista WSD	0							
	30		249.85	Kern County Water Agency Buena Vista - 4	0							
			250.99		61,630							
				K.C.W.A. Reach 13B Subtotal:	0							
			254.47	Kern County Water Agency West Kern - 2	0							
				Kern County Water Agency Wheeler Ridge-Maricopa - 2	107	107						
14A	31		256.11									

1/ Arvin Edison Contractors include Rag Gulch WD, Kern-Tulare WD, Fresno County, Hills Valley ID, Tri Valley WD, Tulare County, Lower Tule River ID, and Pixley ID.

2/ WWD water delivered to KCWA in exchange for SWP water in accordance to agreement dated 4-6-98.

3/ Semitropic WSD is storing this water for MWD.

4/ Local flood water that became State water when it flowed into the California Aqueduct.

Table 22c. Governor Edmund G. Brown California Aqueduct

San Joaquin Field Division, Monthly Deliveries (Continued)

(In acre-feet)

April 1998

Reach No.	Operating Pool		Turnout	Total Diver-sions	Deliveries					
	Beginning and Ending				Entitle-ment	Inter-ruptible Ent.	MWD Ent. Exch.	Exchange 1/	MWD Ent. 2/	
	No.	Structure	Mile							
14A	31	Check No. 31	256.14		118					
	32		258.61	Kern County Water Agency Wheeler Ridge-Maricopa - 3		118				
			260.44	Kern County Water Agency Wheeler Ridge-Maricopa - 4		676			30	
		Check No. 32	261.72							
				KCWA Reach 14A Subtotal:	901	871	0	30	0	
14B	33		264.42	Kern County Water Agency Wheeler Ridge-Maricopa - 5	1,214	1,214				
			266.91	Kern County Water Agency Wheeler Ridge-Maricopa - 6	203		13		190	
		Check No. 33	267.36						510	
	34		270.24	Kern County Water Agency Wheeler Ridge-Maricopa - 7	510					
		Check No. 34	271.27							
				Reach 14B Total:	1,927	1,227	0	700	0	
14C	35		272.39	Kern County Water Agency Wheeler Ridge-Maricopa - 8	237	237				
			276.09	Kern County Water Agency Wheeler Ridge-Maricopa - 9	153		43		110	
				Reach 14C Total:	390		280	0	110	
	Teerink Pumping Plant		278.13		60,358					
15A	36		279.02	Kern County Water Agency Wheeler Ridge-Maricopa - 9A	122	12			110	
			280.06	Kern County Water Agency Wheeler Ridge-Maricopa - 10	855		855			
				Reach 15-A Total:	977		867	0	110	
	Chrismar Pumping Plant		280.36		58,392					
16A	37		282.06	Kern County Water Agency Wheeler Ridge-Maricopa - 11	0	103				
		Check No. 37	283.95							
			285.01	Kern County Water Agency Wheeler Ridge-Maricopa - 12	0					
	38		286.39	Kern County Water Agency Wheeler Ridge-Maricopa - 13A	103					
			287.06	Kern County Water Agency Wheeler Ridge-Maricopa - 13	0					
		Check No. 38	287.09							
	39		287.62	Kern County Water Agency Wheeler Ridge-Maricopa - 13B	48		48			
		Check No. 39	290.21							
17E	40		291.26	Kern County Water Agency Wheeler Ridge-Maricopa - 14	270	210			60	
			293.07	Kern County Water Agency Wheeler Ridge-Maricopa - 15	15		15			
				KCWA TC-15	0					
				K.C.W.A. Reach 16A Subtotal:	436		376	0	60	
	Edmonston Pumping Plant		293.45		57,728					

1/ WWD water delivered to KCWA in exchange for SWP water in accordance to agreement dated 4-6-98.

2/ Semitropic WSD is storing this water for MWD.

Table 23. Governor Edmund G. Brown California Aqueduct
 San Joaquin Field Division, Monthly Deliveries (Coastal Branch)

(In acre-feet)

April 1998

Reach No.	Operating Pool		Turnout	Total Diversions	Deliveries					
	Beginning and Ending				Entitle-ment	Inter-ruptible Ent.	MWD Ent. Exch.	Exchange 1/	MWD Ent. 2/	
	No.	Structure	Mile							
31A	C-1	Coastal Branch Control	0.02		8,312	113	631	5,314	10,000	
		Las Perillas Pumping Plant	1.16		8,312					
	C-2		3.79	Green Valley Water District	0					
		Badger Hill Pumping Plant	4.27		8,088					
	C-3	Coastal Check No. 3	7.21							
	C-4		9.34	Castaic Lake WA (Devil's Den WD #1)	113					
		Coastal Check No. 4	9.34							
	C-5	Coastal Check No. 5	12.20							
	C-6		13.30	Kern County Water Agency Berrenda Mesa - 3	631					
			14.83	Kern County Water Agency Berrenda Mesa - DD	0					
				Kern County Water Agency Berrenda Mesa - PO	5,314					
		Devil's Den Pumping Plant	14.86		1,346					
				K.C.W.A. Reach 31A Subtotal:	5,945	5,945	0	0	0	
				K.C.W.A. Total:	25,879	14,569	0	1,310	10,000	
33A	C-7	Bluestone Pumping Plant	19.05		1,293	1,098	293	0	0	
	C-8	Polonio Pass Pumping Plant	26.54		1,421					
	C-9	Tank Site 1	27.81	(CCWA) Polonio Pass Treatment Plant						
33B	C-10	Shandon T.O.	38.23	Santa Barbara County (CCWA)	1,098					
		Tank Site 2	58.63	Central Coast:	0					
34	C-11	Chorro Valley T.O.	69.31	San Luis Obispo County (CCWA)	293					
		Energy Dissipater	78.12							
35	C-12	Lopez T.O.	85.86	SLOCFC & WCD	0					
				CCWA Total:	1,391					
		Guadalupe T.O.	102.70	SBCFC & WCD	0					
		Santa Maria T.O.	107.43	SBCFC & WCD	0					
38		So. Cal. Water T.O.	109.20	SBCFC & WCD	0					
				SBCFC & WCD Total:	0	0	0	0	0	
		Tank Site 5	115.42							

1/ WWD water delivered to KCWA in exchange for SWP water in accordance to agreement dated 4-6-98.

2/ Semitropic WSD is storing this water for MWD.

Table 24. Southern Field Division Plant Data

(in acre-feet)

April 1998

Date	West Branch				East Branch						
	Oso Pumping Plant	Warne Powerplant Generation	Castaic Powerplant		Alamo Powerplant			Pearblossom Pumping Plant	Mojave Siphon Powerplant		Devil Canyon Powerplant Generation
			Generation	Pumpback	Generation	Bypass Through Plant	Cottonwood Chute		Generation	Bypass Flume	
1	0	0	2,274	2,597	1,708	0	50	1,766	1,478	0	1,502
2	0	0	767	2,026	1,749	0	8	1,745	1,863	0	1,586
3	0	0	2,700	2,330	1,862	0	66	2,011	1,901	0	1,626
4	0	0	954	842	1,726	0	48	1,724	1,944	0	1,511
5	0	0	708	1,609	1,662	0	0	1,614	1,103	0	959
6	0	0	1,789	915	1,637	0	0	1,438	2,048	0	1,797
7	0	0	1,690	0	2,035	0	0	1,716	1,683	0	1,459
8	0	0	2,098	1,603	1,961	0	0	1,835	1,907	0	1,448
9	0	0	2,831	2,662	2,047	0	0	1,892	1,756	0	1,535
10	0	0	2,627	3,092	1,903	0	0	1,894	1,855	0	1,619
11	0	0	1,581	1,830	1,965	0	0	1,817	2,266	0	1,620
12	0	0	1,687	1,229	2,270	0	0	2,195	1,836	0	1,436
13	0	0	3,728	953	1,950	0	0	1,902	2,142	0	1,703
14	0	0	2,293	1,773	2,234	0	0	1,413	1,402	0	1,761
15	0	0	2,781	2,018	2,225	0	0	1,889	2,094	0	1,956
16	0	0	1,009	446	2,220	0	0	2,099	1,860	0	1,930
17	0	0	1,894	1,546	2,017	0	0	2,010	2,104	0	1,874
18	0	0	430	1,242	1,724	0	0	1,662	1,801	0	1,616
19	0	0	893	2,461	1,922	0	0	1,855	1,491	0	1,347
20	0	0	2,791	1,204	1,899	0	0	1,933	2,217	0	1,993
21	0	0	5,416	2,391	1,866	0	0	1,786	1,753	0	1,782
22	0	0	5,001	4,277	1,684	0	323	1,662	1,745	0	1,697
23	0	0	5,403	3,120	1,672	0	0	1,577	1,731	0	1,715
24	0	0	7,561	3,239	1,432	0	0	1,207	1,483	0	1,813
25	0	0	1,474	5,396	1,564	0	0	1,253	1,112	0	1,789
26	0	0	1,057	4,678	1,660	0	0	1,232	1,064	0	1,671
27	0	0	5,616	3,402	1,726	0	0	1,428	1,581	0	1,894
28	0	0	6,669	4,074	1,738	0	76	1,647	1,813	0	2,076
29	0	0	7,410	3,166	1,512	0	531	2,142	2,178	0	2,083
30	0	0	5,023	3,675	2,382	0	0	2,285	2,223	0	2,027
Total	0	0	88,155	69,796	55,952	0	1,102	52,629	53,434	0	50,825

Table 25. Pyramid Lake

Daily Operation

Capacity: 171,200 ac-ft

(in acre-feet except as noted)

April 1998

Date	Water Surface Elevation (in feet)	Storage	Storage Change	Inflow			Outflow			Computed Losses (-) Gains (+)
				Project		Natural	Project		Natural	
				Castaic Powerplant Pumpback	Warne Powerplant	Stream Flow	Castaic Powerplant Generation	Recreation Deliveries	To Piru Creek	
Mar 31	2572.99	163,514								
1	2573.72	164,434	920	2,597	0	581	2,274	0	50	66
2	2575.16	166,260	1,826	2,026	0	575	767	0	50	42
3	2575.43	166,604	344	2,330	0	680	2,700	0	50	84
4	2575.87	167,166	562	842	0	645	954	0	50	79
5	2576.92	168,511	1,345	1,609	0	625	708	0	50	-131
6	2576.71	168,241	-270	915	0	567	1,789	0	50	87
7	2575.68	166,923	-1,318	0	0	543	1,690	0	198	27
8	2575.53	166,732	-191	1,603	0	512	2,098	0	198	-10
9	2575.49	166,681	-51	2,662	0	494	2,831	0	198	-178
10	2576.00	167,524	843	3,092	0	490	2,627	0	198	86
11	2576.15	168,280	756	1,830	0	575	1,581	0	198	130
12	2576.74	168,267	-13	1,229	0	615	1,687	0	198	28
13	2576.73	165,663	-2,604	953	0	540	3,728	0	190	-179
14	2574.69	165,752	89	1,773	0	508	2,293	0	59	160
15	2574.76	165,422	-330	2,018	0	482	2,781	0	50	1
16	2574.50	164,978	-444	446	0	450	1,009	0	50	-281
17	2574.15	165,156	178	1,546	0	424	1,894	0	50	152
18	2574.29	166,197	1,041	1,242	0	411	430	0	50	-132
19	2575.11	168,305	2,108	2,461	0	405	893	0	50	185
20	2575.76	166,936	-1,369	1,204	0	415	2,791	0	50	-147
21	2575.76	164,169	-2,767	2,391	0	432	5,416	0	50	-124
22	2573.19	163,766	-403	4,277	0	450	5,001	0	50	-79
23	2571.70	161,895	-1,871	3,120	0	442	5,403	0	50	20
24	2568.31	157,691	-4,204	3,239	0	426	7,561	0	50	-258
25	2571.83	162,058	4,367	5,396	0	405	1,474	0	50	90
26	2574.97	166,019	3,961	4,678	0	383	1,057	0	50	7
27	2573.36	163,980	-2,039	3,402	0	375	5,616	0	50	-150
28	2571.34	161,445	-2,535	4,074	0	375	6,669	0	50	-265
29	2568.07	157,396	-4,049	3,166	0	368	7,410	0	50	-123
30	2567.13	156,245	-1,151	3,675	0	365	5,023	0	50	-118
Total				-7,269	69,796	0	14,558	88,155	0	2,537
										-931

Table 26. Elderberry Forebay

Daily Operation

(in acre-feet except as noted)

Capacity: 32,746 ac-ft

April 1998

Date	Water Surface Elevation (in feet)	Storage	Storage Change	Inflow		Outflow			Computed Losses (-) Gains (+)	
				Castaic Powerplant Generation	Natural	Castaic Powerplant Pumpback	To Castaic Lake			
					Natural		Natural	Project		
Mar 31	1527.67	26,613								
1	1525.52	25,647	-966	2,274	300	2,597	300	739	96	
2	1519.52	23,037	-2,610	767	286	2,026	286	1,408	57	
3	1520.05	23,262	225	2,700	262	2,330	262	171	26	
4	1520.75	23,563	301	954	262	842	0	0	-73	
5	1519.13	22,872	-691	708	238	1,609	0	0	-28	
6	1521.66	23,953	1,081	1,789	228	915	0	0	-21	
7	1521.06	23,696	-257	1,690	212	0	940	1,272	53	
8	1522.69	24,401	705	2,098	190	1,603	0	0	20	
9	1523.48	24,745	344	2,831	175	2,662	0	0	0	
10	1518.04	22,413	-2,332	2,627	175	3,092	540	1,524	22	
11	1517.95	22,375	-38	1,581	194	1,830	0	0	17	
12	1519.45	23,007	632	1,687	210	1,229	0	0	-36	
13	1521.62	23,936	929	3,728	186	953	590	1,457	15	
14	1523.19	24,618	682	2,293	190	1,773	0	0	-28	
15	1520.90	23,627	-991	2,781	188	2,018	378	1,647	83	
16	1522.59	24,357	730	1,009	165	446	0	0	2	
17	1521.52	23,892	-465	1,894	157	1,546	322	598	-50	
18	1519.74	23,130	-762	430	147	1,242	0	0	-97	
19	1516.28	21,683	-1,447	893	141	2,461	0	0	-20	
20	1517.12	22,030	347	2,791	137	1,204	425	1,025	73	
21	1524.63	25,251	3,221	5,416	125	2,391	0	0	71	
22	1520.00	23,241	-2,010	5,001	126	4,277	251	2,640	31	
23	1525.45	25,615	2,374	5,403	133	3,120	0	0	-42	
24	1535.25	30,161	4,546	7,561	131	3,239	0	0	93	
25	1526.92	26,275	-3,886	1,474	123	5,396	0	0	-87	
26	1516.40	21,733	-4,542	1,057	115	4,678	502	529	-5	
27	1522.00	24,099	2,366	5,616	99	3,402	0	0	53	
28	1524.17	25,048	949	6,669	93	4,074	192	1,541	-6	
29	1532.30	28,755	3,707	7,410	89	3,166	89	537	0	
30	1531.38	28,324	-431	5,023	83	3,675	83	1,805	26	
Total				1,711	88,155	5,160	69,796	5,160	16,893	
									245	

Table 27. Castaic Lake

Daily Operation

(in acre-feet except as noted)

Capacity: 323,699 ac-ft

April 1998

Date	Water Surface Elevation (in feet)	Storage	Storage Change	Inflow			Outflow		Computed Losses (-) Gains (+)	
				From Elderberry Forebay		Natural	Deliveries	Released To Castaic Lagoon		
				Natural	Project					
Mar 31	1513.25	319,801								
1	1513.55	320,467	666	300	739	559	319	298	-315	
2	1513.95	321,357	890	286	1,408	294	298	397	-403	
3	1513.95	321,357	0	262	171	258	298	397	4	
4	1513.85	321,134	-223	0	0	264	304	397	214	
5	1513.65	320,690	-444	0	0	300	300	397	-47	
6	1513.45	320,245	-445	0	0	305	300	397	-53	
7	1514.15	321,802	1,557	940	1,272	298	322	397	-234	
8	1513.85	321,134	-668	0	0	278	298	603	-45	
9	1513.54	320,445	-689	0	0	254	405	595	57	
10	1514.04	321,557	1,112	540	1,524	234	692	397	-97	
11	1513.64	320,668	-889	0	0	230	918	198	-3	
12	1513.24	319,779	-889	0	0	258	947	123	-77	
13	1513.84	321,112	1,333	590	1,457	200	881	0	-33	
14	1513.44	320,223	-889	0	0	167	888	0	-168	
15	1513.94	321,335	1,112	378	1,647	179	946	0	-146	
16	1513.54	320,445	-890	0	0	167	1,076	0	19	
17	1513.59	320,556	111	322	598	163	1,058	0	86	
18	1513.09	319,446	-1,110	0	0	159	1,248	0	-21	
19	1512.55	318,250	-1,196	0	0	165	1,224	0	-137	
20	1512.55	318,250	0	425	1,025	155	1,214	0	-391	
21	1512.15	317,366	-884	0	0	153	1,217	0	180	
22	1512.89	319,003	1,637	251	2,640	145	1,196	0	-203	
23	1512.49	318,117	-886	0	0	139	1,098	0	73	
24	1512.19	317,454	-663	0	0	145	667	0	-141	
25	1511.89	316,791	-663	0	0	151	607	0	-207	
26	1512.09	317,233	442	502	529	132	518	0	-203	
27	1511.85	316,703	-530	0	0	119	532	0	-117	
28	1512.55	318,250	1,547	192	1,541	108	610	0	316	
29	1512.55	318,250	0	89	537	102	732	0	4	
30	1513.05	319,358	1,108	83	1,805	104	732	0	-152	
Total			-443	5,160	16,893	6,185	21,845	4,596	-2,240	

Table 28. Governor Edmund G. Brown California Aqueduct

Southern Field Division, Monthly Deliveries (West Branch)

(In acre-feet)

April 1998

Reach No.	Operating Pool		Turnout	Total Diver- sions	Deliveries						
	Beginning and Ending				Entitle- ment	Rec.	Local	Flood Water	CLWA T1		
	Structure	Mile						No-charge			
29A	42	Oso Pumping Plant	1.49	0							
29F	W2	Quail Lake	5.02	Antelope Valley-East Kern Water Agency	Re-moved						
		Quail Lake Embankment	7.82	Antelope Valley-East Kern Water Agency		Stub					
		Warne Power Plant	14.07			0					
29H	W3	Pyramid Lake		Calif. State Park Pyramid Recreation	0						
		Pyramid Dam	17.10	Piru Creek Fish Enhancement		0					
29J	W4	Castaic Power Plant	25.82	(69,796 AF pumpback)	88,155						
30 1/		Elderberry Forebay									
		Forebay Dam	28.12								
30 1/	W5	Castaic Lake		Calif. State Park Castaic Lake Recreation	0						
		Dam	31.47								
		Castaic Lake Outlet	31.55	MWD - 78"	7,428	7,428					
				MWD - 132"	11,860						
				CLWA - T1	1,143						
				Castaic Lake Water Agency	271						
				United Water Conservation Dist.	0						
				Ventura County FCD	Stub						
				LA Co. Parks & Recreation	0						
				Releases to Lagoon	4,596						
				Reach 30 Subtotal:	20,702	10,581	0	0	10,121		
	W6	Castaic Lagoon		Recreation to Lagoon	55	55					
		Outlet	31.87		4,596						

1/ Reach 30 actually terminates at mile 31.50. It is shown here as including the outlet works at mile 31.55.

All deliveries from the outlet works and from the Lagoon are billed to Reach 30.

Table 29. Silverwood Lake

Daily Operation

(in acre-feet except as noted)

Capacity: 74,970 ac-ft

April 1998

Date	Water Surface Elev. (in feet)	Storage	Storage Change	Inflow			Outflow					Computed Losses (-) Gains (+)	Las Flores Ranch Exchange 1/		
				Project		Natural Stream Flow	Project			Del. To Mojave W.A.	Natural To Mojave River				
				Mojave Siphon Power-Plant	Mojave Bypass Flume		Delivered to CLAWA	Rec.	San Bernardino Tunnel						
Mar 31	3343.61	64,300													
1	3343.66	64,344	44	1,478	0	277	0	0	1,502	0	323	114	35		
2	3344.10	64,740	396	1,863	0	230	0	0	1,586	0	129	18	40		
3	3344.64	65,228	488	1,901	0	234	0	0	1,626	0	103	82	43		
4	3345.19	65,727	499	1,944	0	221	0	0	1,511	0	101	-54	46		
5	3345.52	66,027	300	1,103	0	202	0	0	959	0	103	57	46		
6	3345.90	66,374	347	2,048	0	234	0	0	1,797	0	188	50	46		
7	3346.07	66,529	155	1,683	0	259	4	0	1,459	0	303	-21	46		
8	3346.62	67,033	504	1,907	0	264	0	0	1,448	0	159	-60	46		
9	3346.86	67,254	221	1,756	0	255	4	0	1,535	0	147	-104	45		
10	3347.23	67,595	341	1,855	0	247	2	0	1,619	0	200	60	45		
11	3348.08	68,382	787	2,266	0	381	0	0	1,620	0	198	-42	46		
12	3348.65	68,912	530	1,836	0	511	0	0	1,436	0	198	-183	46		
13	3349.02	69,257	345	2,142	0	368	0	0	1,703	0	369	-93	46		
14	3348.43	68,707	-550	1,402	0	323	0	0	1,761	0	486	-28	46		
15	3348.48	68,753	46	2,094	0	285	0	0	1,956	0	250	-127	45		
16	3348.46	68,735	-18	1,860	0	251	0	0	1,930	0	198	-1	45		
17	3348.70	68,958	223	2,104	0	221	0	0	1,874	0	200	-28	45		
18	3348.74	68,996	38	1,801	0	204	0	0	1,616	0	198	-153	46		
19	3348.93	69,173	177	1,491	0	193	0	0	1,347	0	200	40	46		
20	3349.22	69,443	270	2,217	0	183	0	0	1,993	0	179	42	46		
21	3349.19	69,416	-27	1,753	0	175	4	0	1,782	0	151	-18	46		
22	3349.24	69,463	47	1,745	0	169	4	0	1,697	0	118	-48	46		
23	3349.20	69,425	-38	1,731	0	159	3	1	1,715	0	148	-61	46		
24	3348.93	69,173	-252	1,483	0	151	4	0	1,813	0	118	49	46		
25	3348.20	68,493	-680	1,112	0	147	2	0	1,789	0	79	-69	46		
26	3347.59	67,927	-566	1,064	0	141	0	0	1,671	0	79	-21	46		
27	3347.36	67,715	-212	1,581	0	132	1	0	1,894	0	79	49	46		
28	3347.05	67,429	-286	1,813	0	126	1	0	2,076	0	79	-69	46		
29	3347.21	67,576	147	2,178	0	120	1	0	2,083	0	79	12	46		
30	3347.43	67,780	204	2,223	0	118	0	0	2,027	0	78	-32	46		
Total				3,480	53,434	0	6,781	30	1	50,825	0	5,240	-639	1,354	

1/ Project water delivered from Mojave Siphon in exchange for like amount of Natural Streamflow.

Table 30. Lake Perris

Daily Operation
(in acre-feet except as noted)

Capacity: 131,452 ac-ft

April 1998

Date	Water Surface Elevation (in feet)	Storage	Storage Change	Inflow 1/	Outflow 2/	Computed Losses (-) Gains (+) 1/
Mar 31	1580.84	110,835				
1	1581.12	111,446	611		397	
2	1581.45	112,168	722		396	
3	1581.76	112,847	679		397	
4	1582.07	113,528	681		397	
5	1582.25	113,924	396		451	
6	1582.66	114,827	903		704	
7	1582.91	115,380	553		704	
8	1583.08	115,756	376		704	
9	1583.23	116,088	332		704	
10	1583.37	116,398	310		704	
11	1583.48	116,642	244		704	
12	1583.63	116,976	334		437	
13	1583.78	117,309	333		704	
14	1583.94	117,665	356		704	
15	1584.08	117,977	312		704	
16	1584.22	118,290	313		704	
17	1584.37	118,625	335		704	
18	1584.52	118,960	335		704	
19	1584.63	119,206	246		704	
20	1584.74	119,452	246		704	
21	1584.86	119,721	269		704	
22	1584.97	119,968	247		704	
23	1585.03	120,103	135		704	
24	1585.17	120,417	314		704	
25	1585.28	120,664	247		704	
26	1585.42	120,979	315		704	
27	1585.53	121,227	248		704	
28	1585.66	121,520	293		593	
29	1585.84	121,926	406		583	
30	1586.03	122,355	429			
Total			11,520	29,982	18,435	-27

1/ Readings are not taken on a daily basis. End of month only.

2/ Includes deliveries to MWD from Reach 28J and recreation water to California State Park at lake Perris.

Table 31a. Governor Edmund G. Brown California Aqueduct
 Southern Field Division, Monthly Deliveries (East Branch)

(In acre-feet)

April 1998

Reach No.	Operating Pool			Turnout	Total Diver-sions	Deliveries					
	Beginning and Ending		Structure			Entitle-ment	Rec.	Transfer	Flood Water	Transfer Local Out	
	No.	Structure	Mile	No-charge					Out		
17E	40	Edmonston Pumping Plant	293.45		57,728						
	41		298.65	Kern County Water Agency Tej.-Cas	Stub						
17F		Check No. 41	303.41								
18A	42	Check No. 42	304.99								
19	43	Alamo Powerplant	305.73	(Does not include 1,102 AF flow down Cottonwood Chute)	55,952	3					
			308.05	Antelope Valley-East Kern WA	3						
		Check No. 43	309.70								
	44		311.84	LADWP Connection	0	8					
			313.50	AVEK 245th Street West	0						
	Check No. 44		314.81								
	45		314.93	AVEK 235th Street West	8	236					
			315.57	AVEK 225th Street West	0						
	Check No. 45		319.74								
	46		323.19	AVEK - Fairmont 24"	325	586					
			323.84	AVEK - Fairmont 60"	586						
				Reach 19 Total:	922	833	0	89	0	0	
20A	47	Check No. 47	326.77			22					
	48		326.91	Antelope Valley-East Kern WA Willow Springs Siphon	22						
			329.65	Antelope Valley-East Kern WA 120th Street West	Re-moved						
		Check No. 48	330.82								
	49	Check No. 49	335.93								
	50		336.73	AVEK WA - Quartz Hill (Wheeled for Palmdale WD)	1,610		1,610				
				Antelope Valley-East Kern WA	0						
20B	Check No. 50		341.51								
	51	Check No. 51	342.07								
	52		342.80	Antelope Valley-East Kern WA 30th Street West	Not in Use						
		Check No. 52	343.74								
	53		346.98	PWD Palmdale	0						
			348.14	Antelope Valley-East Kern WA Acton Treatment Plant	0						
		Check No. 53	348.17								
21	54	Check No. 54	350.25			24					
	55	Check No. 55	352.70								
	56	Check No. 56	354.76								
			354.97	Littlerock Creek I.D.	24						
22A	57	Check No. 57	356.93			73					
	58		357.72	Antelope Valley-East Kern WA 96th Street East	73						
22B			359.82	Antelope Valley-East Kern WA East Side Treatment Plant	209	209					

Table 31b. Governor Edmund G. Brown California Aqueduct

Southern Field Division, Monthly Deliveries (East Branch, Continued)

(In acre-feet)

April 1998

Reach No.	Operating Pool		Turnout	Total Diversions	Deliveries					
	Beginning and Ending				Entitlement	Recreation	Ex-change	Flood Water	No-charge	
	No.	Structure	Mile							
22B	58	Pearblossom Pumping Plant	360.61			52,629				
	59	Check No. 59	366.09							
	60	Check No. 60	373.94							
	61	Check No. 61	379.00							
	62	Check No. 62	384.26							
	63	Check No. 63	389.50							
	64	Check No. 64	395.10							
	65	Check No. 65	400.32							
	66		401.10	Mojave Water Agency						
				Morongo 24" and 42"		0				
23	Check No. 66		403.41	Mojave Water Agency						
				Hesperia		0				
24	67	Mojave Siphon Powerplant	405.48	Las Flores Ranch		1,354			1,354	
			405.65			53,434				
25		Silverwood Lake	407.65	Crestline Lake Arrowhead Water Agency		30			30	
				Calif. State Park						
		San Bernardino Tunnel	411.46	Silverwood Agency (Rec.)		1				
	26A	Devil Canyon Afterbay Control Structures	412.88							
				MWD-SC Rialto		0				
				Desert Water Agency (MWD Wheeling Exchange)		9,683			9,683	
				San Gabriel Valley Water District		357			357	
				Coachella Valley WD (MWD Wheeling Exchange)		12,891			12,891	
28G	69	Santa Ana Valley Pipeline	425.46	San Bernardino Valley Metropolitan Water District		60			60	
28H			433.06	MWD						
			440.05	(SBVMWD Exchange)		0				
28J			442.00	MWD-SC						
	Lake Perris		443.44	Box Springs		0				
				MWD-SC						
				Perris Bypass Pipeline		0				
				MWD-SC 18"		0				
				MWD-SC 54"		5,890			5,890	
				MWD-SC 78"		10,374			10,374	
				Calif. State Park						
				Lake Perris Recreation		12			12	
				MWD Total:		59,540	49,419	0	0	
								10,121	0	

Table 32. Water Quality At Selected SWP Locations

April 1998

Constituent	Units	Thermalito Afterbay At Outlet	North Bay Aqueduct Barker Slough Pumping Plant	Banks	Delta Mendota Canal At McCabe Rd.	California Aqueduct				Devil Canyon Afterbay Near San Bernardino
						O'Neill Forebay Outlet (Check 13)	Kettleman City (Check 21)	Near Hwy 119 (Check 29)	Tehachapi Afterbay (Check 41)	
Alkalinity	mg/l	34	132	95	61	67	83	65	66	73
Arsenic	mg/l	<0.001	0.002	0.002	<0.001	0.002	0.002	0.003	0.003	0.002
Boron	mg/l	<0.1	0.3	1.2	0.2	0.3	0.4	<0.1	<0.1	0.2
Bromide	mg/l	NR	0.10	0.29	0.09	0.12	NR	NR	0.01	0.15
Calcium	mg/l	7	19	25	18	22	29	17	16	21
Carbon - Total Organic	mg/l	NR	8	5	4	4	NR	NR	4	4
Chloride	mg/l	1	43	98	32	44	60	4	4	53
Chromium	mg/l	<0.005	0.006	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
Copper	mg/l	0.001	0.003	0.005	<0.001	0.002	0.003	0.002	0.002	0.002
Fluoride	mg/l	<0.1	0.1	0.2	<0.1	0.1	0.1	0.2	NR	0.1
Hardness	mg/l	30	121	121	81	99	132	59	57	98
Iron	mg/l	0.011	0.016	<0.005	<0.005	0.006	<0.005	0.006	<0.005	<0.005
Lead	mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Magnesium	mg/l	3	18	15	9	11	15	4	4	11
Manganese	mg/l	<0.005	0.045	<0.005	<0.005	0.006	<0.005	<0.005	<0.005	<0.005
Nitrate + Nitrite	mg/l	NR	0.08	1.39	NR	NR	NR	NR	0.50	0.53
Phosphorus-Ortho	mg/l	NR	0.08	0.13	NR	NR	NR	NR	0.07	0.06
Phosphorus-Total	mg/l	NR	0.21	0.18	NR	NR	NR	NR	0.09	0.09
Selenium	mg/l	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	NR	NR
Sodium	mg/l	3	46	91	32	41	56	12	11	41
Specific Conductance	µS/cm	74	457	702	343	412	541	170	NR	422
Sulfate	mg/l	2	32	77	49	58	82	10	10	45
Total Dissolved Solids	mg/l	48	262	399	188	222	300	108	NR	227
Trihalomethane Formation Potential	µg/l	NR	981	596	470	500	NR	484	485	472
Turbidity	NTU	9	29	2	11	9	14	26	23	4
Zinc	mg/l	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

mg/l milligrams per liter

µg/l micrograms per liter

µS/cm microSiemens per centimeter

NR - Not Reported

NTU - nephelometric turbidity units

Table 33. Water Quality At Selected Delta Stations

April 1998

Date	Tides (feet above mean sea level)		Flow In CFS		Electrical Conductivity in milliSiemens/cm									Cl in mg/l	
	(Antioch) Daily Mean		Net Delta Outflow Index	Rio Vista	Antioch	Chippis Island	Emmaton		Jersey Point		Clifton Court	Cache Slough	Delta Mendota Canal	Contra Costa Canal Intake	
	Mean Daily	Monthly Average													
	Hi	Half			md	md	md	14dm	md	14dm	md	md	md	md	
1	4.22	2.25	149,200	149,200	100,161	0.26	0.13	0.14	0.18	0.24	0.26	0.26	1.60	0.00	147
2	3.79	1.97	133,679	141,440	86,699	0.26	0.13	0.14	0.18	0.24	0.26	0.26	1.49	0.00	135
3	3.37	1.91	120,312	134,397	84,644	0.27	0.13	0.14	0.17	0.24	0.26	0.27	1.55	0.00	112
4	3.31	1.96	122,511	131,426	85,215	0.28	0.13	0.15	0.16	0.24	0.26	0.29	1.24	0.00	123
5	3.25	1.97	122,667	129,674	80,125	0.28	0.15	0.15	0.16	0.23	0.25	0.28	0.86	0.00	103
6	3.18	1.91	114,746	127,186	75,533	0.27	0.15	0.15	0.16	0.22	0.25	0.30	1.07	0.00	118
7	3.04	1.64	110,278	124,771	73,111	0.26	0.15	0.16	0.15	0.21	0.24	0.32	1.28	0.00	117
8	2.80	1.41	106,944	122,542	71,381	0.26	0.15	0.16	0.15	0.22	0.24	0.33	1.41	0.00	113
9	2.96	1.57	104,246	120,509	69,402	0.25	0.15	0.16	0.15	0.21	0.23	0.33	1.49	0.00	118
10	3.28	1.69	103,286	118,787	64,447	0.25	0.14	0.16	0.15	0.21	0.23	0.33	1.47	0.00	107
11	3.43	1.87	98,544	116,947	59,855	0.24	0.15	0.16	0.15	0.21	0.23	0.32	1.45	0.00	113
12	3.42	1.61	94,671	115,090	57,262	0.24	0.15	0.17	0.15	0.22	0.22	0.32	1.46	0.00	98
13	3.20	1.54	92,161	113,327	56,114	0.24	0.15	0.17	0.15	0.22	0.22	0.31	1.41	0.00	97
14	3.18	1.48	94,227	111,962	55,694	0.25	0.15	0.17	0.16	0.22	0.22	0.30	1.26	0.34	93
15	3.05	1.39	94,213	110,779	53,556	0.25	0.15	0.17	0.16	0.23	0.22	0.28	1.29	0.33	93
16	2.82	1.23	92,984	109,667	51,336	0.26	0.13	0.18	0.16	0.22	0.22	0.29	1.38	0.34	78
17	2.56	1.12	88,403	108,416	47,797	0.25	0.00	0.18	0.16	0.21	0.22	0.28	1.34	0.32	80
18	2.43	1.09	83,783	107,048	45,064	0.25	0.00	0.19	0.17	0.21	0.22	0.27	1.40	0.30	73
19	2.31	1.05	78,235	105,531	41,746	0.24	0.00	0.18	0.17	0.20	0.22	0.27	1.41	0.29	77
20	2.26	1.09	73,643	103,937	39,956	0.23	0.00	0.18	0.17	0.19	0.21	0.26	1.37	0.30	73
21	2.25	1.02	70,495	102,344	39,152	0.22	0.00	0.18	0.17	0.19	0.21	0.26	1.32	0.28	70
22	2.72	1.31	68,489	100,805	37,961	0.22	0.00	0.18	0.17	0.19	0.21	0.25	1.40	0.26	75
23	3.49	1.71	65,989	99,292	37,590	0.22	0.00	0.18	0.18	0.19	0.21	0.25	1.40	0.27	67
24	3.51	1.49	64,879	97,858	38,398	0.22	0.14	0.17	0.18	0.19	0.21	0.26	1.43	0.27	60
25	3.52	1.32	65,830	96,577	39,827	0.21	0.14	0.18	0.18	0.18	0.20	0.26	1.20	0.27	56
26	3.51	1.29	66,600	95,424	40,564	0.21	0.13	0.17	0.18	0.18	0.20	0.25	1.11	0.27	67
27	3.77	1.43	67,626	94,394	40,404	0.21	0.13	0.17	0.18	0.18	0.20	0.25	1.10	0.26	67
28	3.92	1.50	66,649	93,403	40,827	0.21	0.13	0.16	0.18	0.17	0.20	0.25	1.33	0.25	67
29	3.90	1.63	66,590	92,479	40,238	0.20	0.13	0.16	0.18	0.17	0.19	0.24	1.62	0.25	71
30	3.93	1.95	65,747	91,588	39,251	0.20	0.13	0.16	0.17	0.17	0.19	0.24	1.57	0.25	45

Clifton Court Cl(mg/l)=200X EC - 25

N.R. = No Record.

f = Excess Delta conditions with fish concerns.

r = Excess delta conditions with export/inflow ratio concerns. dm = Daily Mean

s = Balanced water conditions with storage withdrawals. md = Mean Daily

Table 34. Pesticides, Herbicides, and Other Organic Substances Detected In the SWP

April 1998

Sampling Location	Sample Date	Chemical Detected	Concentration µg/l
	1/	2/	3/
North Bay Aqueduct At Barker Slough Pumping Plant	March-18-1998	None Detected	
California Aqueduct At Banks Pumping Plant	March-18-1998	None Detected	
Delta Mendota Canal At McCabe Road	March-18-1998	None Detected	
California Aqueduct Near Kettleman City (Check 21)	March-18-1998	None Detected	
California Aqueduct At Tehachapi Afterbay (Check 41)	March-18-1998	None Detected	
Devil Canyon Power Plant At Entrance To Santa Ana Pipeline	March-18-1998	None Detected	

1/ Locations are normally sampled during March, June, and September. Monthly reports will include data for the month in which samples were most recently taken.

2/ These detection results were double checked with the lab, due to the unlikelihood of nothing being detected, the results are still being looked into.

3/ Micrograms per liter.

Table 35. Oroville and Delta Field Divisions Energy Data

April 1998

(in kWh)

Date	Oroville Thermalito Complex		Barker Slough	Cordelia	Banks Pumping Plant		South Bay	Del Valle
			Pumping Plant Load	Pumping Plant Load	Total Load	SWP Load	Pumping Plant Load	Pumping Plant Load
	Generation	Load						
1	17,512,992	0	7,028	12,404	0	0	59,325	215
2	17,712,864	0	5,859	10,080	0	0	55,720	193
3	15,687,072	0	7,273	13,825	11,520	11,520	53,145	196
4	6,487,488	0	6,202	11,333	18,816	18,816	49,270	192
5	8,879,328	2,880	5,971	12,376	17,664	17,664	47,110	181
6	11,243,520	288	5,250	10,094	20,928	20,928	19,305	197
7	12,075,840	0	6,384	13,195	225,216	225,216	11,670	189
8	11,890,656	0	7,385	11,641	22,272	22,272	25,290	223
9	12,138,336	0	6,622	11,312	27,648	27,648	28,870	185
10	13,658,112	0	6,979	13,167	18,624	18,624	31,100	194
11	13,218,624	0	6,419	12,439	18,240	18,240	36,290	191
12	13,051,584	0	5,474	10,479	18,432	18,432	16,580	186
13	12,577,536	2,016	9,884	13,587	17,472	17,472	17,750	202
14	14,660,640	0	14,861	18,221	17,664	17,664	13,360	199
15	12,983,040	0	18,928	27,195	17,472	17,472	23,265	201
16	13,409,568	0	18,214	27,293	17,472	17,472	17,665	195
17	10,653,696	0	17,465	26,530	18,048	18,048	26,410	189
18	7,683,840	0	20,762	32,095	18,432	18,432	17,475	186
19	6,828,768	0	19,985	30,926	18,432	18,432	19,555	178
20	9,144,864	2,016	20,251	31,724	17,664	17,664	28,390	181
21	10,198,368	288	20,636	30,352	16,704	16,704	26,515	216
22	9,253,152	288	22,449	33,250	15,744	15,744	63,130	197
23	8,713,152	3,744	20,958	31,675	16,512	16,512	37,440	182
24	5,548,320	4,320	16,373	27,426	17,856	17,856	64,605	214
25	2,160,288	3,456	14,616	30,807	17,280	17,280	64,290	199
26	1,683,360	5,472	15,141	32,158	175,104	175,104	70,315	202
27	10,582,560	0	16,996	31,808	116,928	116,928	50,740	214
28	12,014,496	0	20,104	35,637	10,752	10,752	38,335	222
29	12,623,616	0	15,218	22,680	10,176	10,176	33,885	231
30	9,733,536	0	14,777	21,896	12,096	12,096	49,045	206
Total	324,009,216	24,768	394,464	647,605	951,168	951,168	1,095,845	5,956

Table 36. San Luis Field Division Energy Data

(in kWh)

April 1998

Date	Dos Amigos Pumping Plant		Gianelli Pumping-Generating Plant			
	Total Load	SWP Load 1/	Total Generation	SWP Generation 1/	Total Load	SWP Load 1/
1	682,416	130,416	0	0	24,768	24,768
2	403,344	13,344	0	0	23,328	23,328
3	351,504	20,504	139,968	139,968	373,248	16,248
4	200,736	-264	0	0	723,456	16,456
5	162,000	0	0	0	21,024	21,024
6	146,448	8,448	0	0	222,912	18,912
7	144,432	6,432	332,640	332,640	723,168	9,168
8	192,384	8,384	0	0	24,192	24,192
9	184,320	29,320	0	0	124,128	124,128
10	179,280	26,280	0	0	375,264	375,264
11	190,080	37,080	0	0	21,024	21,024
12	205,488	52,488	0	0	21,600	21,600
13	191,376	38,376	0	0	23,904	23,904
14	241,632	88,632	0	0	23,904	23,904
15	246,384	84,384	0	0	24,192	24,192
16	299,520	137,520	0	0	24,192	24,192
17	405,216	171,216	0	0	22,752	22,752
18	519,984	276,984	0	0	21,888	21,888
19	324,144	81,144	0	0	21,024	21,024
20	408,384	49,384	0	0	21,888	21,888
21	569,232	209,232	0	0	23,040	23,040
22	435,888	102,888	0	0	22,464	22,464
23	752,976	257,976	777,600	9,600	14,400	14,400
24	744,624	432,624	779,904	3,904	13,248	13,248
25	692,208	380,208	1,567,872	23,872	13,536	13,536
26	605,520	293,520	0	0	21,024	21,024
27	707,760	191,760	974,304	4,304	17,568	17,568
28	750,816	234,816	970,272	10,272	17,856	17,856
29	896,112	269,112	958,464	-21,536	15,552	15,552
30	1,195,344	535,344	971,136	27,136	16,128	16,128
Total	13,029,552	4,167,552	7,472,160	530,160	3,036,672	1,054,672

1/ Negative values may appear in SWP columns and indicate a mismatch of scheduled CVP energy and actual pumping; adjustments to SWP water shares are made to balance the mismatch.

Table 37. San Joaquin Field Division Pumping Plant Energy Load Data

(in kWh)

April 1998

Date	Coastal Branch					California Aqueduct			
	Las Perillas	Badger Hill	Devils Den	Bluestone	Polonio	Buena Vista	Teerink	Chrisman	Edmonston
1	20,758	55,112	23,418	22,212	24,300	422,928	472,752	1,107,936	4,052,160
2	13,082	36,080	28,314	27,090	28,800	471,096	494,568	1,115,712	4,106,880
3	7,388	18,520	31,194	28,134	31,230	476,928	531,864	1,228,320	4,487,760
4	3,176	6,920	23,130	22,752	23,148	439,920	483,120	1,104,480	4,014,000
5	1,834	3,480	22,860	20,772	22,914	413,136	466,776	1,078,272	3,822,480
6	8,722	22,080	25,902	24,984	26,964	457,776	475,488	1,064,736	3,774,240
7	11,320	29,464	30,978	28,674	30,870	457,776	521,712	1,211,616	4,563,360
8	10,812	29,600	25,866	24,030	26,172	508,608	579,888	1,328,544	4,497,120
9	10,210	26,760	25,758	23,976	25,884	508,536	564,624	1,262,880	4,675,680
10	6,490	16,136	28,548	27,306	29,160	501,048	533,088	1,233,216	4,377,600
11	4,906	11,784	28,728	27,540	29,268	469,872	550,656	1,217,664	4,485,600
12	6,070	14,144	39,456	37,026	41,148	565,632	593,352	1,365,984	5,090,400
13	8,118	20,200	24,660	24,300	27,036	533,520	566,856	1,251,360	4,529,520
14	15,540	38,888	35,820	34,416	37,296	508,320	619,056	1,431,648	5,148,720
15	24,044	67,048	35,136	31,464	33,624	545,976	576,504	1,320,192	5,043,600
16	27,540	73,512	34,740	34,020	36,972	531,936	619,632	1,429,344	5,027,760
17	32,038	85,544	35,982	33,678	36,792	506,376	543,096	1,244,160	4,602,960
18	22,356	59,872	20,772	19,116	20,106	410,544	483,120	1,055,520	3,955,680
19	22,138	58,688	36,720	35,064	38,466	538,128	543,960	1,261,728	4,439,520
20	29,264	75,808	31,428	29,862	30,924	481,032	548,280	1,205,856	4,367,520
21	33,228	87,096	34,614	34,938	34,758	531,648	526,608	1,177,344	4,244,400
22	42,290	109,472	42,318	41,562	43,290	512,640	568,800	1,244,160	4,471,920
23	44,452	115,240	47,016	48,168	47,178	476,064	487,944	1,092,672	3,851,280
24	31,750	86,232	44,604	45,486	45,504	395,352	411,984	929,952	3,242,880
25	19,992	56,080	43,272	44,172	43,560	421,056	432,360	949,536	3,557,520
26	16,296	43,800	51,102	52,758	52,110	523,224	471,240	1,049,184	3,800,880
27	15,848	41,264	33,840	34,704	33,840	451,440	498,600	1,111,104	3,998,880
28	21,372	56,304	32,310	33,210	32,724	556,416	520,200	1,107,072	4,055,040
29	29,816	78,568	41,760	43,362	42,012	685,296	661,824	1,382,976	4,717,440
30	39,160	110,864	41,076	42,840	41,850	751,392	693,850	1,491,552	5,384,880
Total	580,010	1,534,560	1,001,322	977,616	1,017,900	15,053,616	16,041,802	36,054,720	130,387,680

Table 38. Southern Field Division Energy Data

(in kWh)

April 1998

Date	West Branch			East Branch			
	Oso Pumping Plant Load	Warne Powerplant Generation	Castaic Powerplant SWP Generation	Alamo Powerplant Generation	Pearblossom Pumping Plant Load	Mojave Siphon Powerplant Generation	Devil Canyon Powerplant Generation
1	7,504	0	264,000	203,728	1,182,900	125,223	1,849,536
2	7,056	0	264,000	207,116	1,185,228	167,979	1,935,840
3	7,056	0	264,000	223,804	1,371,060	150,402	1,974,912
4	7,448	0	264,000	211,400	1,184,436	159,180	1,866,720
5	6,664	0	253,000	204,372	1,109,220	82,005	1,211,712
6	7,392	0	264,000	201,488	992,436	165,375	2,225,472
7	7,504	0	264,000	253,708	1,181,652	139,692	1,773,216
8	7,168	0	264,000	241,724	1,263,024	156,177	1,776,288
9	7,056	0	264,000	251,916	1,304,016	147,924	1,879,968
10	7,840	0	264,000	233,996	1,300,152	149,835	1,956,864
11	9,184	0	264,000	243,040	1,246,788	183,687	1,987,584
12	9,688	0	264,000	280,700	1,503,336	139,923	1,771,968
13	9,688	0	264,000	238,616	1,309,800	169,113	2,072,352
14	9,520	0	264,000	274,484	973,896	114,156	2,069,472
15	10,584	0	576,000	273,924	1,296,840	169,806	2,371,776
16	10,192	0	576,000	271,236	1,444,236	155,316	2,335,776
17	9,632	0	576,000	244,552	1,380,444	165,585	2,271,936
18	9,520	0	576,000	208,208	1,142,376	148,764	1,979,328
19	8,960	0	528,000	237,300	1,271,664	118,986	1,687,584
20	9,408	0	480,000	233,100	1,323,768	178,017	2,443,296
21	9,408	0	480,000	230,216	1,225,488	142,464	2,147,712
22	9,240	0	840,000	204,232	1,144,272	142,569	2,079,168
23	9,688	0	840,000	204,260	1,086,108	139,860	2,098,944
24	9,856	0	840,000	172,116	833,112	120,918	2,210,208
25	9,800	0	840,000	190,008	864,708	95,025	2,199,744
26	9,744	0	720,000	201,292	853,404	88,893	2,054,784
27	9,296	0	720,000	210,644	1,013,160	129,633	2,307,360
28	9,408	0	720,000	212,016	1,126,476	152,523	2,498,016
29	9,072	0	720,000	182,868	1,465,176	180,264	2,500,416
30	7,896	0	720,000	296,072	1,561,332	177,177	2,412,288
Total	262,472	0	14,437,000	6,842,136	36,140,508	4,356,471	61,950,240